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LECTURE VII.

GLANDERS—ITS SYMPTOMS AND POST-MORTEM APPEARANCES.

I ACKNOWLEDGE, Gentlemen, that I enter on the subject of my present lecture with some reluctance. The disease of which I have to speak has been recognised from the time of Hippocrates of Cos, and few modern veterinary writers have given a more accurate and complete account of its symptoms than we find in the works of the "Father of Medicine." Three-and-twenty hundred years have rolled on since then, and we are not agreed as to the tissue primarily affected, nor as to the actual nature of the disease. As to the cure of glanders, we know nothing about it. We hear of many specifics: some of them have their day—but a short one,—and are heard of no more, until reproduced as new discoveries. The truth of the matter is, that we have amused ourselves with worse-than-useless speculations and theories, instead of being employed in the patient accumulation of facts.

We must pursue our course slowly and cautiously. I will first endeavour to connect together the prevailing symptoms; they may possibly lead us,—they alone can lead us—to the part primarily affected, and to the nature of the morbid affection of that part, and to the cause of that affection; and, these important points being settled, we may obtain a little knowledge as to the prevention of the disease, although we may be compelled to leave the remedial treatment pretty nearly where we found it.

ACUTE AND CHRONIC GLANDERS.

Before, however, I describe the symptoms of this disease, I must enter my protest against the common division of glanders into acute and chronic. I am aware that it exists under these forms; but I cannot allow this to anything like the extent that has been represented by some; it is so essentially different in its nature and character, and governed by such totally opposite laws. There is this impropriety in our division, that the chronic here comes first, and the acute succeeds. A discharge is observed from one nostril or from both; it continues for months and years, and neither the health nor the usefulness of the horse is impaired; but, all at once, the discharge increases,—chancres appear on the septum—the respiration is laborious—the cough is urgent—the animal wastes away—farcy buds appear along the course of the superficial absorbents—they ulcerate, and death quickly closes the scene.

It is like the scrofula of the human subject; there are small glands under the chin or the ear, or about the throat, moveable, soft, productive of no inconvenience, and so they continue for one, two, or several years; when all at once they rapidly enlarge; they burst; the constitution becomes affected; the ulcers spread; the patient becomes emaciated; tubercular phthisis is established, and he dies. Now these are only different stages of the same disease—various causes, known or unknown, retarding or hastening its full development and fatal termination. We may, if we please, call these stages chronic and acute, but we shall be betrayed, as we have been in glanders, into inexplicable confusion, if we regard them as different diseases, and governed by different and contradictory laws.

SYMPTOMS OF GLANDERS.

Nasal Discharge.—The earliest symptom is, almost invariably, an increased discharge from the nostril; small in quantity—constantly flowing—*not sticky at first*—aqueous—a little mucus gradually mixing with it, and this continuing for an indefinite pe-

riod of time before it assumes a viscid character.

Here, Gentlemen, is an error into which our best writers on veterinary pathology have fallen. They have described with sufficient accuracy the middle stage of glanders, but they have overlooked the early and most important one, when a cure might, if ever, be effected; and when the mischief resulting from contagion is most frequently produced. The discharge of glanders is not sticky when it may be first recognised. It is aqueous or mucous, but small and constant, and is thus distinguished from catarrh or nasal gleet, or any other defluxion from the nostril. I would then wish to impress it on your minds, that this small and constant defluxion, overlooked by the groom and the owner, and too often by the veterinary surgeon, is a most suspicious circumstance.

We owe a great deal to Mr. James Turner here. He first, or chiefly, directed our attention to this important and disregarded circumstance; indeed he is so suspicious of mischief, that although a horse be in ever so good condition, if he have this small constant discharge, and especially from one nostril, he separates him at once from his companions. It is a very proper precaution. The owner will not be offended, although this defluxion should not ultimately betray lurking mischief of a worse character, and he will give you credit for vigilance,—for discrimination, and pleasing attention to his interest, if you should be right in your surmise.

Mr. Turner relates a case so much in point, that I must not omit to quote it. A farmer asked his opinion respecting a mare in excellent condition, with a sleek coat, and in full work; he had had her for seven or eight months, and during the whole of that time there had been a discharge from the right nostril, but in so slight a degree as scarcely to be deemed worthy of notice, and especially as there was no adherence of the submaxillary gland, which was not larger than a tick-bean, and quite loose. He now wanted to sell her, and, like an honest man, wished to know whether he might conscientiously warrant her. Mr. Turner very properly gave it as his opinion, that, the discharge having existed for so long a time, he would not be justified in sending her into the market. The farmer ordered her at once to the slaughter-house.

A farrier, however, whose ideas of glanders had always been connected with a sticky discharge and an adherent gland, met with her there, and said that Mr. Turner had committed a most egregious blunder, and bought her and led her away. Three months passed on, when Mr. Turner, examining the post-horses in a neighbouring inn, discovered that two of them were glandered, and two more farcied; while standing next to the first that was attacked, and his partner in work, was his old acquaintance the farmer's mare, *with the same discharge from her nostril*, and who had, beyond question, been the cause of all the mischief.

This, Gentlemen, will be an instructive lesson to you. In every examination for soundness,—in every medical examination of the horse, pass not over the slightest increased nasal defluxion, even although it be nearly or entirely of an aqueous character. Endeavour to get at the history of this discharge, the length of time it has existed, and its quantity and constancy. Do not be misled by its want of viscidity, whatever your favourite authors may tell you. When you read that "there always remains a peculiar degree of viscidity and glueyness in it (the discharge of glanders) which distinguishes it from all other mucous and purulent secretions," refer this to the *second* stage of the disease, and remember that for many months before this, the disease may have existed in an "insidious" and highly contagious form. In the majority of cases, however, some degree of stickiness does characterise the discharge of glanders from a very early period.

The Left Nostril oftenest affected.—It is a singular circumstance that this discharge is much more frequent from the left nostril than from the right. M. Dupuy says that out of eight cases of glanders, he met with one only with discharge from the right nostril alone. This difference in the affected nostrils does not exist to so great an extent in our practice, and I am inclined to suspect that there must have been some error in the observations made by the learned professor; but in two cases out of three among us the discharge is from the left nostril alone. I know not of any anatomical or physiological fact that will account for this. I could account for the left leg failing oftener than the right;—we mount and dismount on the left side—the horse generally leads with it; there is more wear and tear of that limb; but I cannot satisfactorily account for this usual affection of the left nostril. It is true the reins are held in the left hand, and there may be a little more bearing and pressure on the left side of the mouth, but I confess that that does not sufficiently explain the result.

You observe that I have used the terms *left* and *right* instead of *near* and *off*. I do so advisedly, because the latter, originally the mere slang of the stable, however much in use among horsemen, and to a certain extent perhaps necessary to be adopted in our communications with them, are terms that have never been adopted in any foreign veterinary school. They are perfectly unknown among scientific men abroad, and

unrecognised by medical men at home, except those who have been, and occasionally a little too deeply, taught in the school of the horseman and the groom. Now, that we are attempting to overtake and to vie with our veterinary continental brethren, and to vindicate our relationship to our medical brethren at home, it may be adviseable, in our scientific discussions at least, to forget the vocabulary of the stable.

Lessons of Caution.—If we deny then the uniform stickiness of the discharge, we may occasionally be a little puzzled. We shall be so, and it will teach us to be more cautious in our professional examinations, and less positive in some of our decisions. I have heard a practitioner boast that he had passed (as sound) no fewer than 60 horses in one morning. I thought it a disgraceful confession, when I first heard it; and the more I have thought of it the more have I been convinced that it involved gross dereliction of duty to his employers. It is well known that there is one practitioner who has the conducting of far more examinations for soundness than any other in the metropolis. His reputation is founded entirely on his caution. He employs what some would think a very unnecessary portion of time in every examination; and has been known to detain a horse one, two, or three days in his stable before he would give a decided opinion. We are beginning to learn a lesson of caution already, when we find the difficulty of distinguishing the characteristic discharge of glanders. I shall have too many occasions to impress this lesson upon you as we go on.

Progress of the Nasal Discharge.—Inflammation cannot long continue without producing some disorganisation of structure or alteration of function in the affected part; and, the disease having existed for a greater or less length of time, the secretion from the nose is altered in quality as well as increased in quantity, and we have the peculiar viscidity of which all our writers speak, and which cannot be mistaken. The discharge is more pellucid than that of catarrh—it has seldom any offensive smell, it still continues to flow constantly on, and it has a singular stickiness, unpleasantly adhering to the finger, and sometimes in a manner glueing the nostrils together. This also continues for an indefinite period of time until the disease has committed greater ravages on the membrane which is its seat, and the discharge becomes purulent, bloody, fœtid. Ulceration has then taken place in the membrane of the cavity, or of some of the cells connected with it. The colour of the septum will now begin to change. It has usually been described as pale, or livid, or brown, in glanders. In the early stage of the disease, however, it has a decided, and sometimes intense, redness of hue. It indicates inflammation, and the degree of inflammation which exists. But when that inflammation has debilitated the membrane on which it existed, and the process of ulceration commences, it becomes pale, livid, leaden-coloured, or brown.

Chancrous Ulceration of the Nostril.—The ulceration once established, the disease hastens in its progress, and the sores begin to be visible on the lower part of the septum; they are sores of a peculiar character,—not mere abrasions—not stripes of excoriation as we sometimes see in nasal gleet—not the undefined ragged ulcerations, which are usually consequent on inflammation;—but chancres,—distinct ulcers, with rounded, elevated, well-defined edges. You will observe their peculiar character in these preserved specimens, and more particularly in this, from the recent subject. You will particularly observe that they are found, not scattered here and there upon the septum, but in regular succession;—they follow the course of the vein which runs down towards the centre of the septum, and contiguous with which, and lying almost in contact with it, are the absorbents of the septum. I beg your particular attention to this, and with reference to another form, or perhaps stage, of glanders which I shall presently have to consider, namely, farcy—inflammation and ulceration of the superficial absorbents, and showing already the connexion between these maladies, or rather their identity.

They run down almost to the orifice of the ductus ad nasum. Let me once more caution you not to confound that orifice with one of these chancrous ulcers, or to mistake it for the first appearance of ulceration on the lower part of the septum. Take care likewise that you do not mistake for ulcers, little spots of rather concrete mucus lying on the membrane. You would not be the only persons who have done so, somewhat to the compromise of their professional reputation. Always try whether you can rub off the suspicious spot with your finger.

These ulcerations sometimes spread ove the greater part of the cavity. In these specimens you may trace them plainly on the æthmoid, and along the inferior edges of the turbinated bones; they occasionally produce, or are accompanied by, caries of these bones; they eat fairly into them, but the ulcers on the septum are in most cases superficial, and the perfect separation is still preserved between the diseased nostril and the sound one. When these chancres appear, the case is usually a lost one; but in a few instances, either by the power of medicine or of nature, these chancres take on a healthy character, and cicatrise and disappear. A fine specimen of this is now on

the table. Ulcers have rarely long appeared in the nostrils before the constitution becomes affected; the coat stares; it has a peculiar pen-feathered appearance, scarcely ever seen in simple want of condition. There is a strange dryness and stiffness of the skin, and the hair comes off with the slightest touch; the belly is tucked up to an extraordinary degree, and the strength rapidly declines; there is cough, difficult and painful; the inflammation or ulceration has then travelled down the larynx and trachea, and the lungs are evidently affected; the breathing becomes difficult from another cause; the lining membrane of the nose is thickened by these inflammatory and ulcerative processes; the air-passage is obstructed and almost closed, and each act of respiration is accompanied by a hoarse roaring sound: there is a peculiar tenderness about the forehead; the membrane lining the frontal sinuses is inflamed or ulcerated; the integument of the forehead becomes thickened, and gives an appearance of swelling; the whole head, and face, and muzzle particularly, swell. Farcy now is superadded to glanders, or glanders has degenerated into farcy; or rather, perhaps, more of the absorbents are involved, and little tumours appear about the muzzle, and face, and neck, following the course of the veins (for these point out the direction of the absorbents), and the tumours rapidly ulcerate. Tumours, still pursuing the path of the absorbents, now appear on the inside of the thighs, and they are connected together by a corded substance; this is the inflamed and enlarged lymphatic; and ulceration, rapidly spreading, soon follows the appearance of these buds. The deeper-seated absorbents are now affected; one or both of the hind legs swell tremendously, and become stiff, hot, and tender. The loss of flesh and strength can now be marked every day; the membrane of the nose becomes of a dirty-livid colour; the membrane of the mouth is strangely pallid; the conjunctiva is infiltrated with a yellow fluid, like a sheep with the rot; the discharge from the nose becomes more profuse and insufferably offensive; the animal presents one mass of putrefaction, and at length dies exhausted.

Enlargement of the Submaxillary Glands.—I have been delineating the usual succession of symptoms when ulceration has once appeared in the nostril; but, long ere that, possibly many a month before, there is another symptom whence the disease took its name,—enlargement of the submaxillary glands. A portion of the fluid secreted from the membrane of the nose, altered in character by the peculiar inflammation there existing, is reabsorbed; and, as it is conveyed along the lymphatics, some of it passes through the glands, which thus become inflamed and enlarged: in fact they sympathise with every inflammatory affection of the lining membrane of the nose; the horse can scarcely bear the slightest cold without the glands beneath the jaw becoming swollen and tender, and, sometimes, proceeding to suppuration. There is, however, a peculiarity accompanying the inflammation which they take on from the absorption of the virus of glanders; they are rarely large, except at first; still more rarely very hot or tender; but they are characterised by a singular hardness, by their proximity to the jaw-bone, and by their apparent and often actual adhesion to it—the adhesion produced by the inflammatory action going forward in it, and the effusion of coagulable lymph. This hardness and adhesion accompanying discharge from the nostril, and being on the same side as the nostril whence the discharge proceeds, affords proof, not to be controverted, that the animal is glandered. This is a general and decisive symptom, but not an invariable one. We are not justified in pronouncing a horse with slight discharge from the nostril to be safe, because the glands are neither adherent nor much enlarged. We must not forget Mr. Turner's case, in which, although the tumefied gland was on the same side as the discharge, and the disease had existed at least eight months, it was not larger than a kidney-bean, and had not the slightest tenderness or adhesion. I have seen cases in which the distinct gland was not larger than a pea, and others in which there was no enlargement of the glands, and only a thickening, and that a very slight one, of the surrounding cellular texture. Do not, therefore, fall into the common error about this. You may trust to the *adhesion* of the gland, but be not misled by its *looseness*, or even by its *absence* altogether. The widow of the proprietor of some of the Paddington coaches had a horse from one of whose nostrils there had, for a considerable time, been a slight aqueous discharge; there was a little thickening of the sub-integumental cellular substance beneath the jaw, and a small loose knot, of the size of a pea, could be felt within it. No one, not even the veterinary attendant, suspected mischief; and it was not until one horse after another had become glandered, and six of them had died, that the true nature of the evil was apparent. Another lesson of caution, Gentlemen,—involving the subject of glanders, and the examination with regard to glanders, in some difficulty, but still leaving sufficient to guide you if you will be patient and circumspect.

Diseases resembling Glanders.—*Strangles* has sometimes been mistaken for glanders, but he must have been very inattentive who

could have been guilty of such a blunder. Strangles is a disease of young horses; it is accompanied by fever, cough, sore-throat, wheezing, enlargement—not of a single small gland, *but of the whole subjacent cellular texture between the jaws*,—a phlegmonous tumour forming in it—forming in the *centre* of it—becoming prominent toward the middle, evidently containing a fluid, and at length bursting; and then the fever abating, and the thickening gradually subsiding and the horse doing well. Glanders can scarcely be confounded with common catarrh or sore-throat, or epidemic catarrh with enlargement of the glands of the throat. There is fever—that which is rarely or almost never seen in glanders, loss of appetite, inability to swallow, *profuse* discharge, *mucous, purulent, irregular*, the gland tender and hot and moveable. With proper treatment the fever abates, the cough disappears, the swellings subside, and the discharge from the nose gradually ceases.

The post-mortem appearances of glanders are our surest guides to that object at which I have been aiming in this long detail of symptoms—namely, the seat and character of the disease. The nostril is generally more or less blanched, but with spots or lines of inflammation of considerable intensity. Ulceration is almost invariably found, of a chancrous character, on the septum, and often on the æthmoid and turbinated bones. The ulcers evidently follow the course of the absorbents—sometimes almost confined to the course of the main vessel, or, if scattered over the membrane generally, thickest over the path of the lymphatic, and evidently radiating from that line to other parts. These specimens before you place this disposition of the chancres in the clearest point of view. The æthmoid and turbinated bones are often filled with pus, and sometimes eaten through and carious; but in the majority of cases the ulceration is confined to the external membrane, although there may be pus within. In aggravated cases the disease extends through all the cells of the face and head.

In these specimens you trace its path down the larynx and trachea, and the ulcers still follow one line, that of the main trunks of the absorbents. In aggravated cases its course can often, but not always, be traced on to the lungs. It produces inflammation in those organs, characterised in a few cases by congestion; in others by that peculiar consequence of congestion, hepatization;—the cellular texture of the lungs is obliterated, a portion of them becoming one uniform mass. Most frequently, however, when the lungs are affected at all, we find tubercles—miliary tubercles, minute granulated specks on the surface or in the parenchyma, and not accompanied by much inflammation. Here are specimens of this affection of the lungs in glanders. In a few cases we have larger tubercles which have softened and burst, and terminated in vomica.

The appearances of the lungs to which I would chiefly direct your attention, and as throwing great light on the primary seat of the disease, are these—viz. the occasional absence of any morbid affection of the lungs, even in the most aggravated cases of glanders, and the correspondence between the lung that may be affected, and the nostril whence the discharge proceeded.

A record of nineteen cases of discharge from the left nostril presents the following results:—In four, no affection of the lungs; in ten, congestion or hepatization, or other marks of inflammatory action in the left lung only—the right lung was perfectly sound; in two cases, both lungs were affected, but the left lung most so; and in three cases both were nearly equally affected. In eight cases of discharge from the right nostril, two presented no disease of the lungs; in four, the right lobe only was diseased; in one, both were affected, but the right lung most violently; and in one, both lungs were equally diseased. In ten aggravated cases there was discharge from both nostrils; the left lung only was diseased in one; and in the other nine; both presented nearly equal traces of inflammation. The lesions of the abdominal viscera, and of the brain and its membranes, seemed to be perfectly accidental.

We are now, I think, Gentlemen, prepared to come to some satisfactory conclusion as to the primary seat and nature of glanders in our next lecture.

LECTURE VIII.

GLANDERS CONTINUED.

The Lining Membrane of the Nose the Primary Seat of Glanders.—There can be no doubt I think, Gentlemen, of the conclusion to which we must arrive, that the primary seat of glanders is the lining membrane of the nose. A discharge from the nostril is that which causes the disease to be first suspected, which attends it through every period of its course, and accompanies it at its fatal termination. It is inflammation of the pituitary membrane, recognised by that which is the earliest and invariable symptom of inflammation of a mucous surface, increased secretion—secretion altered in character as well as quantity, becoming vitiated, acrimonious, malignant. I will not enter into the controversy whether it be a specific inflammation—one that is not governed by common laws—or whether the malignant and infectious character which it speedily assumes may be traced to the ex-

treme vascularity and sensibility of the membrane, and the absurd and injurious irritation to which it is so much exposed.

The Progress of the Inflammation.—It is inflammation, whether specific or common, of the pituitary membrane—possibly for months, and even for years, confined to that membrane, and even to a portion of it—the health and the usefulness of the animal not in the slightest degree impaired. Then, from some unknown cause, not a new but an intenser action is set up, the inflammation more speedily runs its course, and the membrane becomes ulcerated, and the ulcerations spread on either side, down the septum, and along the pharynx, the larynx, and the trachea. The ulceration spreads through the medium of the absorbents—the superficial absorbents first. The secretion is of so acrimonious a nature, that the vessels through which it passes take on inflammation, and the virus accumulating about the valves of the absorbents, the inflammation runs higher there, and ulceration speedily follows, and assumes that peculiar chancrous form which characterises inflammation of these vessels.

Observe these specimens; see, running along the course of the main trunk of the absorbents of the membrane of the septum, or radiating from it, these distinct and separate ulcerations, and mark the elevated line which connects one with another. The simple increased secretion does not empoison, or even excoriate, the membrane, nor does it produce any constitutional affection while the membrane remains sound; but, ulceration having once commenced, the disease is propagated from part to part, and with more or less rapidity, through the medium of the absorbents, and the whole frame becomes vitiated. This more general and constitutional affection we term *farcy*. When the air-passages and the respiratory organs alone are involved, we denominate it *glanders*.

The Lungs not the Primary Seat of Disease.—It is plain that the lungs are not the primary seat of disease. When they are affected, it is by continuity of membrane, and by the gradual spread of inflammation and ulceration. In some of the cases which I mentioned in my last lecture, and which were suffered to run their course, the lungs were sound. In the majority of cases the inflammation or disorganisation was confined to the lung corresponding with the nostril whence the discharge had proceeded. When the lungs do seem to participate in the disease, they are comparatively but slightly affected. There are miliary tubercles, but with only slight congestion, and no ulceration. Where vomicæ are found, peripneumony had preceded or accompanied glanders, and was excited by other causes. In latent or invidious glanders there is no poison in the blood, no unhealthy state of the system; every function is fully and perfectly discharged. Absorption of the fluid discharged from the ulcer must precede the constitutional affection.

I have described the process from inflammation to ulceration, and from that to the empoisonment of the system, as often exceedingly slow; but, as in the other constitutional affections produced through the means of the absorbents, it is sometimes quickened almost beyond belief. If the exciting cause of inflammation in the membranes has more than usual power, or, from debility or previous irritability, the membrane is predisposed easily and violently to take on inflammatory action, the disease will run its course in four-and-twenty hours; but the same appearances are presented, the same process is clearly marked; the ulcers follow the direction of the absorbents along the septum, and along the membrane generally, and along the trachea to the lungs. It is the same disease, but differing only, yet sometimes strangely differing, in the intensity and rapidity of propagation.

M. Dupuy's notion of Glanders.—M. Dupuy, and after him many of the French veterinarians, entertain a curious notion of the nature of glanders. He calls it "a *tuberculous disease*. He supposes that innumerable small, firm, grey, bodies, miliary tubercles, are formed on the upper part of the septum, or in some of the sinuses, particularly the frontal ones. That for a certain period of time they remain unchanged, and during that time do not in the slightest degree interfere with the health of the animal; nor are there any means of ascertaining their existence, except that by their presence as foreign bodies they so far irritate the membrane on which they grow, as to cause a somewhat increased secretion from that portion of the membrane. They continue in this state an indefinite period of time. He thinks that he has traced their existence for five or six successive years. At length from some unknown cause they become disorganised; they soften and ulcerate, and then we have the chancre of glanders. These chancres sometimes penetrate through the perichondrium and the cartilage, the periosteum and the bone; they discharge a poisonous fluid, a portion of which is absorbed: then the whole frame becomes affected, and the disease may be communicated to others.

This theory is very ingenious, but it is deficient in proof. I am not aware of any English veterinarian who has detected these tubercles; and of one thing I am certain, that if they exist, the disease is contagious long before they disorganise and break.

GENERAL VIEW OF GLANDERS.

Now then, Gentlemen, we can conveniently pause for awhile. We are arrived at a point whence we can command much of the path we have yet to travel. Let us look around us a little, and somewhat retrace our steps. Glanders is inflammation of the Schneiderian membrane, strictly local for a while, and often for a long while, and during its insidious state, and even when the discharge becomes gluey, and sometimes after chancres have appeared, the horse is apparently well. There are hundreds of glandered teams about the country with not a sick horse among them. Do not listen to the accounts which you hear of the glandered horse being necessarily more or less out of condition, or that some deviation from health is necessary to his receiving the infection of glanders. Do not puzzle yourselves with the distinction between "healthy and unhealthy disease," a strange connexion of terms, and as unintelligible as many parts of an otherwise valuable work on glanders. Quit the dangerous yet often fascinating regions of theory, and look beyond the walls of an infirmary, where disease alone is found and lives. Go into practice, examine the stables of the farmer and the post-master and the waggon proprietor, and more particularly the miserable huts that shelter the barge-horse. These are the very domain of glanders, and many an inhabitant yields to its influence. When the disease has developed itself in all its chancrous malignancy and power, we see enough, and more than enough, of its ravages; but, ere it throws off the mask, although it is in full possession of its victim, where do we find horses so hardy, so healthy, so capable not only of ordinary, but of cruel exertion? I cannot say that glanders, like the rot, improves the condition, but I am sure that often, and for a long while,—for months and even for years,—it does no injury to the general health. The inflammation is purely local, and is only recognised by that invariable accompaniment of inflammation,—increased secretion. Although that secretion is poisonous, and its neighbours fall victims to it, it affects not the animal whence it came. But this continued inflammation at length tells, or other circumstances increase its power and its effect, and the vitality of the tissue is destroyed, and suppuration succeeds; but not that of a healthy character—not that which is connected with reproduction,—it is malignant and destructive from the beginning; but soon another process commences, salutary or destructive, according to circumstances. There are absorbents on every surface; they are found on the surface of the chancres which are beginning to appear; and they take up the fluid which is secreted from the ulcers, and they soon feel its poisonous influence. The absorbents become inflamed and tumid, and, where the virus rests as it were, namely, at the valves, destruction of the part ensues, and the chancres spread in every direction.

Some portion of the venom passes on, and is carried into the circulation, and mixes with the blood, and vitiates the blood. The experiment by Professor Coleman, of the transfusion of a portion of the blood of a glandered horse into a healthy ass, and the transfusion of the disease with it, was satisfactory on this point.

Then comes the constitutional affection. The membranes in the neighbourhood, and those most susceptible of irritation, first yield. Chancres proceed down the pharynx and the larynx, and gradually the ulcers spread over the frame. The acrimonious fluid, mingling with the blood everywhere, begins everywhere to attack that tissue which is most susceptible of its influence, namely, the internal lining membrane of the absorbents; and in the most distant parts of the frame (the hinder extremities are a favourite situation) the absorbents become corded, and tumours appear in the situation of the valves, and ulcerations ensue. First, the superficial lymphatics are affected; then the deeper-seated become involved: the whole frame is empoisoned; farcy is established in its most horrible form, and death speedily closes the scene.

CAUSE OF GLANDERS.

What is the cause of this dreadful malady? Although it may by-and-by prove that we are powerless as to the removal of the disease, yet if we can trace its cause and its manner of action, we may do something in the way of prevention at least. We have been able to accomplish much in this way. Glanders does not commit one-tenth part of the ravages it did thirty or forty years ago, and it is now only found, as a frequent and prevalent disease, where neglect and filth and want of ventilation exist.

The Character and Office of the Schneiderian Membrane.—Its seat is the Schneiderian membrane; a highly vascular one—a tissue of bloodvessels—a membrane possessed of exquisite sensibility, specific and common, and these mingling together for the perfection of each,—thus vascular and sensitive, placed as a guard to the lungs; covering within and without those convoluted bodies which, in a manner, fill the whole of the nasal cavity, and everywhere expose its mucous surface; intercepting every deleterious substance, and even gas. Comparatively few particles penetrate to the pharynx, or if they do, the sentinel has

given warning, and other air-passages take up the action. The rimæ glottidis refuse to admit, or the muscles of respiration unite to expel, the intruder. Little beside pure atmospheric air is destined to reach the lungs, or if the animal is destroyed by some deleterious gas, he dies more from the want of that oxygen which is necessary to the continuance of respiration, than from the actual stimulant or depressive effect of the inspired air.

The Schneiderian membrane is the guard of the lungs, and it arrests every intruder. No part of the frame has a more important function to perform,—no part is endowed with greater sensibility,—no part is exposed to so much injury. The currents of air which are continually traversing it; the thousand extraneous bodies which are impinging upon it; the pungent and poisonous vapours which are coming so incessantly in contact with it; all are sources of irritation and debility, and we need not wonder that it is so disposed to inflammation, and that that inflammation will run its course.

Alternations of Temperature.—Besides the injuries to which it is unavoidably exposed, there are others, and far more powerful, artificially and absurdly introduced. I have adverted to them when speaking of coryza. Nothing could be so debilitating or so dispose this membrane to inflammation and all its consequences, as the sudden change of temperature to which this sensitive membrane used to be exposed, in that destructive system of stable management which once everywhere prevailed, and which is still maintained in too many establishments. The heat alone of the stable, without the sudden and excessive change, would wear out the vital power of the membrane, by the constant state of excitement it produces.

Ammoniacal Vapours.—But, worse than this, and more connected with our subject (for these alternations of heat and cold are far more injurious to the lungs than to the membrane of the nose, and dispose more to pneumonia than to glanders), there are the irritating pungent vapours which abound in every heated and closed stable. I have said that the lining membrane of the nostril, and the conjunctival membrane, are painfully irritated when we breathe but for a few minutes the atmosphere of these ill-managed stables. The horse breathes there all night and the greater part of the day. The injurious effect of these gases is spent on the pituitary membrane chiefly, or alone with the exception of the eye. By it the ammonia, so plentifully extricated, is arrested and absorbed. If the slightest portion of it reached even the larynx, violent, and so long as the stimulus was applied, incessant cough would be excited. All the mischief which is done is inflicted on the conjunctival and Schneiderian membranes, disposing the one to the specific inflammation of specific ophthalmia, and the other to the inflammation of glanders, or supporting that inflammation when excited. The lungs are comparatively little or not at all affected.

Often-Respired Air and the Vapours of Putrefying Substances.—But there are other changes going on in the air of the closed stable, not so deleterious as some have imagined, nor affecting the constitution in the way that they have described, but sufficiently productive of evil. The often-respired air, and the gases extricated in the putrefactive fermentation of the filth of the closed and neglected stable, are depressive perhaps rather than stimulating—they are productive of low and typhoid diseases rather than of acute ones, and they produce their first, their grand, almost their only effect, on that mucous membrane, among the sinuosities and convolutions of which they wind, and by which too they are arrested and absorbed; or, if the constitution suffers, it is through the medium of this membrane, this frequent, prevailing, but little suspected, inlet of infection and disease. The membrane which we know does arrest the ammoniacal gas, so that scarcely an atom of it reaches the larynx, arrests likewise these deleterious vapours; but it suffers sadly in the discharge of this all-important function, and is disposed for low and typhoid inflammation, degenerating into, or perhaps constituting, glanders. Therefore it is that the foul stable is the very hot-bed, not of pneumonia, but of glanders; for it is the membrane of the nose, far more than that of the lungs, which is exposed to its fatal influence.

On this account is the paramount importance of free ventilation in the stable. We owe everything here to Professor Coleman. While the cavalry barracks, forty years ago, were continually thinned by this equine pest (and I have heard that in one of the depôts, at the close even of the Peninsular war, several hundreds of horses were condemned in one morning), it is a disease now of comparatively rare occurrence among our troops. Agreeing in the general effect, and thankful for the result of ventilation, I am not disposed to cavil much, even when the principle is pushed to a somewhat extravagant extent. I can understand the good of it with reference to the disease now under consideration.—These gases impinge upon the Schneiderian membrane, and, like the ammoniacal gases of the stable, are arrested and absorbed by it, and have their debilitating effect in the production of glanders. But when I am told

that this want of ventilation is the cause of a rabies in the dog and the rot in sheep, I do wonder a little. That wonder ceases when I consider how prone our best physiologists and pathologists have been to push their favourite theories too far, and that even the immortal Jenner, upon subjects not altogether dissimilar, and having reference to some of our domestic quadrupeds, rode his hobby-horse farther and more wildly.

Comparison of different Stables.—Want of cleanliness and ventilation are the grand sources of glanders; the latter acting to a certain extent; the former far more influential, but deriving its greatest power to injure from an alliance with the latter. No stables used to be closer and hotter than those of gentlemen; they were perfect ovens, and the same foul air was breathed over and over again. There used to be, and there is still, pneumonia often enough, for there was an absurd and ruinous change of temperature; but glanders was an unfrequent or unknown guest. Why? The fæcal impurities were cleared away as quickly as possible.

The stables of the horse-dealer used to be, and still are, hot enough, in order to put a sleekness upon the coat; and there was and is plenty of catarrh, and catarrhal fever, and pneumonia, but no glanders, for cleanliness was the order of the day.

The farmer's stable was, and continues to be, ill managed and filthy enough; urine and dung accumulate from week to week, until the place is a perfect dunghill; there is no declivity to drain away the urine, no water to wash away the filth; but the same carelessness prevailed every-where—below, around, and above; but the windows were broken, and the roof was any-thing but air-tight, and there was many a cranny in the walls, and the fumes were driven away as fast as they arose.

But the stables of the post-master, and the waggon-proprietor, and the proprietor of the barge-horse,—sometimes almost too low for an ordinary man to stand upright in, too dark for the accumulation of filth to be observed, too far from the master's eye for the stableman to do his duty, and where the fumes of the fæces and the urine are continually arising,—these, I have said, are the very hot-beds of glanders; there it is almost a constant resident.

Glanders is, in a manner, the consequence of stabling the horse. In many parts of the world it is unknown, as in South America and in Arabia; and it used to be in Portugal and in Spain, but in the two last, and in North America and in British India, it is now rife enough. Wherever our stabling, with all its absurdity, was introduced, there glanders followed in its train.

ST. THOMAS'S HOSPITAL.

CLINICAL LECTURE

BY

JOHN ELLIOTSON, M.D., F.R.S.,

PROFESSOR OF THE PRINCIPLES AND PRACTICE OF MEDICINE IN THE UNIVERSITY OF LONDON,

Delivered December 12th, 1831.

CHRONIC DYSENTERY.

I PURPOSE speaking this morning, Gentlemen, particularly of a case of chronic dysentery, which did exceedingly well, and which was in William's Ward. The cases of dysentery that we have here are all chronic. I do not recollect seeing an instance of acute dysentery in the hospital, and the chronic cases all occur in persons who have come here from hot climates. I hardly recollect a case of real dysentery in the hospital occurring in a patient who had not come from a hot climate. Diarrhœa, both acute and chronic, we have of course in abundance in our own climate; but from the contiguity of the hospital to the river we have a larger number of persons residing in the neighbourhood who have been in hot climates, and come back suffering from the effects of those climates. I will now state the case from the books.

George Cook, aged 35, has been ill seven months. He visited Calcutta, and afterwards Madras, and on his way home was seized with dysentery, and had from twenty to thirty stools a day, attended with a great deal of pain and tenesmus, mucus constantly appears in the stools, and sometimes pure blood. Now, the character of dysentery is, that there should be severe griping, great straining,—tenesmus, a quantity of mucus, and perhaps blood, in the stools, while the fæces by no means form a considerable portion of the evacuations. Sometimes they are retained altogether, and sometimes they are discharged merely in lumps. The principal discharge in dysentery is a secretion from the intestines. In diarrhœa, on the contrary, the character of the discharge is fæcal. There may be blood, there may be mucus, but still the bulk of the discharge is fæcal, and there is not, necessarily, tenesmus. Sydenham mentions, as the characteristic feature of dysentery, mucous stools and griping. Akenside, who wrote on this disease, and was a celebrated poet, was formerly physician to this hospital, and he, in addition, states that there is tenesmus. He wrote on two subjects, about as opposite as it is possible to

conceive, the pains of the bellyach, and the pleasures of the imagination, and what is more surprising, he wrote very admirably on both. His "Pleasures of the Imagination," I need not say, forms one of the most classical works in our language, and his work on Dysentery was, at the time of its publication, one of the best that had been written on that subject.

This patient was taken ill in the month of March last, while sailing from Madras to the Cape of Good Hope, at which place he was received into the hospital, and placed under medical treatment for three weeks. Three weeks after he left the Cape, on his voyage to England, he was taken ill with hepatitis, but had no affection of the bowels. After arriving here, and being on shore a fortnight, the bowel complaint returned, the stools became slimy, and subsequently mixed with blood. At the time of coming into the hospital he had a large number of stools daily, generally fifteen every day, with great griping, blood and mucus being in the stools, and the tenesmus being very severe. I found there was tenderness of the abdomen on pressure, more particularly over the region of the liver. You will remember that he had had hepatitic disease before. He was much wasted, and there was a yellow cast of the skin. His appetite was bad.

Now, under these circumstances, it would have been very wrong not to have treated the case as one of inflammation of the intestines and liver. As there was such great tenderness all over the abdomen, to have given the man astringents and opiates alone would have been very absurd. To relieve the tenesmus he was ordered a glyster of tincture of opium, two scruples to four ounces of starch every night; but thirty leeches were applied at the same time to the abdomen, and these were repeated. On the 15th of the month, twenty leeches were ordered to be applied every other day, and as he had been ill so long I then ventured to give him slight astringents, but I think his cure was chiefly owing to the antiphlogistic measures that were employed. In some cases you have no tenderness of the abdomen, though many patients present this phenomenon. Sometimes the number of stools and the degree of griping are out of all proportion to the intensity of the tenderness. In other cases there is great tenderness of the abdomen, fully commensurate with the number of the stools and the griping. In the first case you may trust almost entirely to astringents and opiates; in the other you must trust almost entirely to antiphlogistic measures—perhaps entirely so. I gave this man only half a grain of sulphate of copper, when I did begin with astringents, because I saw that the disease was decidedly inflammatory, and the object in giving astringents at all was, that as the inflammatory part of the disease was subsiding, there might be an astringent ready to do any good that was required. In a large number of cases we give opium in the form of enema for the purpose of relieving the tenesmus, which arises, I believe, in most cases from the inflammation chiefly affecting the rectum. If there be severe dysentery, so long as the rectum is free, there is no tenesmus, but the moment the disease reaches the rectum you have the tenesmus. Of course the more severe the affection in the neighbourhood of the anus, the greater is the tenesmus. He was better on the 8th of November. The pain was removed, his appetite was better, he had only two motions a day, and there was not so much tenderness. He went on in this way for some little time, when from some reason or other he became worse; the cause I cannot tell, but it might arise from catching cold, or some little error in diet. Of course antiphlogistic measures were now pursued more vigorously, and the leeches were ordered every day. Now, without the exhibition of opium by the mouth, and by only increasing the sulphate of copper to one grain three times a day, this man did exceedingly well. On the 25th of the month a blister was applied to the abdomen.

This case is very instructive, as showing, that though the man had been ill so long, the attack was inflammatory, and yielded to steady anti-inflammatory treatment. I cannot impress it upon you too often, that a disease may have lasted some months, and even years, and yet that inflammation may be as truly active as it was at the commencement of the affection. Some persons make no distinction between acute and chronic affections on the one hand, and active and passive on the other. A disease may last for a long time, and yet require antiphlogistic treatment; and it is quite absurd, because a disease has been of long continuance, to think that you must give stimulants to excite the part, and tonics to support the general system.

The case is useful, therefore, as showing that cases of dysentery are continually of an inflammatory nature, and also as showing that though the disease may have lasted for a length of time, yet that it will give way to antiphlogistic treatment. I need not speak of the efficacy of copper in this case, because you have seen so many instances of its efficacy when combined with opium; but I would rather dwell on an opposite view of the treatment, by showing you the successful results where no astringents were employed till quite towards the end. If there be an inflammatory state, and you take rational means

to subdue it, you will generally succeed. One great secret in the treatment of all diseases, is to ascertain whether there is an inflammatory state or not, and if there be inflammation, all the means you can employ are comparatively of no importance, if you do not put into practice the antiphlogistic plan. Other remedies may not be required, or if they be, they will then operate with ten times more effect.

In regard to the cause of the disease, I believe as it occurs in hot countries, it is in a great measure owing to some exhalation, really malaria. In this country we scarcely see anything of dysentery, and for this simple reason, that our malaria is inconsiderable, not generated by intense heat, and our food is better. The malaria of this country is of a very mild nature, compared with that of hot climates. There was a time when dysentery prevailed in England to a frightful extent. You will find in Sydenham an account of the great havoc which dysentery made in London in his day. But now we scarcely see anything of the kind, except it be a sporadic acute case now and then. Dysentery prevails in hot countries at the same time as remittent fever, and it has been known on many occasions to arise where persons were clearly exposed to the exhalations of putrid vegetable matter. You find it mentioned, that at the old barracks at Cork, the troops had water contaminated by the sewers and made brackish by the tide. This state of things was altered; they were no longer supplied with this water, and dysentery, which before had prevailed to an alarming extent amongst them, immediately ceased. A friend of Linnæus ascribed his dysentery to drinking stagnant water that had become contaminated in a cistern of juniper wood. Continually, where persons have been exposed to the exhalations of putrid vegetable matter, particularly in hot countries, this disease has prevailed to a great extent. It has been common in camps where the encampment has been made in marshy ground, and it has been common on board ship, where bilge water was improperly retained, and where the men were exposed to the exhalations arising from it. It prevailed to some extent not long ago at the Penitentiary at Milbank, and there is every reason to believe that it arose from the damp situation in which the building is erected. You know that it stands in as bad a place as could possibly have been selected,—just such a spot as would have been selected if it was intended to keep the prisoners there but for a very short time. However, there can be no doubt that the liability to this disease is much increased by bad food, and excessive fatigue; and persons will frequently not suffer from it, if they be allowed good and wholesome food. In London the people were formerly fed very indifferently, and the town was very much exposed to putrid exhalations from ditches and bad drainage throughout the city, the consequence of which was, that the disease prevailed extensively.

Dysentery appears to be seated in the large intestines, and as the colon forms the most extensive part, it has been called *colitis*, but perhaps that is hardly right, because the rectum is generally implicated as well as the colon. It is clear, too, that there is something more than inflammation of the colon. There is a great disposition to spasm, and, therefore, as the old name is well established, I think it is altogether better that it should be retained. When the disease has continued any time, you will find great havoc in the structure of the intestines. The glands are all very much enlarged and ulcerated, and the coats are all in a state of hypertrophy and ulceration. You will find in Dr. Bailey's plates a very good representation of the effects of this disease. In the acute form you find all the marks of acute inflammation, great redness of the intestines, both within and without; shreds of lymph lying upon the internal part. In fact, all the marks of a violent inflammation. In the chronic form, however, you will find the usual effect of chronic inflammation, great induration, ulceration, thickening, great addition to the substance of all the coats. The mucous membrane will be thickened, as also the cellular membrane between the coats, and sometimes the peritoneal coat, but chiefly the mucous and the cellular membrane, so that the weight of the intestines is enormous. (The learned lecturer then exhibited Dr. Bailey's plates, illustrating various examples of this affection.)

You cannot expect a remedy in such a dilapidated condition of the intestines as is shown by these plates. It would be vain to expect that any medical man could effect a cure. In some instances the ulceration goes through, and then either immediate peritonitis takes place, or chronic peritonitis. Now and then the ulceration will proceed nearly through, and then the peritoneal coat will burst. Now and then peritonitis occurs with sudden pain, and the patient dies in a few days. Now and then the part is blocked up by something—pieces of omentum for example. Now and then adhesions are formed around. Now and then, when the ulceration has gone through, the contents escape so slowly, that inflammation of a very slow character is set up. Here is a specimen of the colon, thickened—hypertrophied. Here is another portion not so much thickened, but still there is a considerable degree of thick-

ening, and you will observe there are ten thousand ulcerations in it. Both these specimens were taken from persons who died of dysentery. Here is another specimen in which there is great hypertrophy, and the ulceration has gone completely through. These preparations, you observe, exactly correspond with the representations given in Dr. Bailey's plates. Nothing, indeed, can be more faithful than those plates. Here is a specimen of mere ulceration. I do not know whether it was taken from a patient labouring under dysentery or not, but it shows the same state. Here also is a piece of hypertrophied intestine, in which you will observe ulceration. Some have ascribed the disease in a great measure to an affection of the liver, but it is quite unnecessary to resort to such a mode of explaining it. It is positively a disease of the intestines. You may have acute hepatitis with acute dysentery, and chronic hepatitis with chronic dysentery. The cause which produces the one may produce the other, but you often have the disease without any affection of the liver at all. Still, however, as they are parts of the same system—organs of the same cavity, and engaged in performing the same functions, you may expect more or less connexion between their diseases; but as to referring all dysentery to an affection of the liver, you might just as well refer all the disorders of the liver to the intestines. You sometimes find the spleen affected, and, of course, various other organs.

I may mention that formerly some persons had an idea that this affection was owing to persons eating fruit. But so far is this from being correct, that dysentery has been very often relieved by giving persons plenty of wholesome fruit, and it is found that the disease does not prevail the most at the time people eat the largest quantity of fruit. In Zimmerman's book on Experience, published in 1751, which you will find well worthy your perusal whenever you have leisure (which is not, of course, during the winter period), he mentions that a whole French regiment was nearly destroyed in the south of France by dysentery. The officers purchased the entire crop of several acres of vineyard for the regiment, the consequence of which was that not one man more died from the disease, nor was any other person seized with it. Tissot also mentions that eleven persons in one house were attacked with dysentery. Nine ate fruit and recovered. The grandmother, and one darling child, ate no fruit, but took wine and spices, and they both died. The others, however, who took no wine and spices, recovered perfectly. The worst flux in Holland that was ever known to occur (and this is more proof of the affection arising from malaria, for the fact I am going to state took place where malaria prevails to a great extent) occurs at the end of July, when there were only strawberries to be had, and the soldiers never tasted any. The disease ceased when the grapes were ripe, and the soldiers had them in great abundance. Thus it appears to be entirely wrong to ascribe the disease to eating fruit. There can be no doubt that bad food, bad water, bad air, lead to the disease, and sudden cold and dampness when the body is heated will excite it; and it certainly appears to me that bad air contaminated with emanation from decayed vegetable matter has by far the greatest effect in producing it.

The disease will at last degenerate into mere chronic diarrhœa. There will be no griping except at the moment a person goes to stool. In diarrhœa there is generally no griping except at that period. As soon as the stool is over, so is the griping. In dysentery, however, there is terrible griping without going to stool; but the disease will degenerate into diarrhœa, all the spasms will cease, and perhaps at last there will be fæcal stools. It is from this circumstance that you will frequently see I write up in the wards—"*Diarrhœa dysenterica*,"—it is nothing more than dysentery degenerated or degenerating into diarrhœa. It has been supposed by some that ipecacuanha has great power over the disease, but I do not know that such is the case. In the active form, Akenside recommends three grains every six hours. I have no doubt it would empty the stomach, and in the acute form might be a good practice, but the most decided way of curing the disease when acute, is to bleed freely from the arm and the abdomen, and give mercury and opium. You have to treat it as acute inflammation of the intestines, and as there is great spasm, you may give opium, but you must take care to clear out the intestines by means of calomel exhibited from time to time, and followed if requisite by other purgatives; or you may give calomel in small and frequent doses to affect the mouth, and follow it up by castor oil from time to time. You will find two parties—one recommending large doses at distant intervals, (and you may affect the mouth just as well in that way as by small repeated doses) and the other recommending small doses. In the former there is this advantage, that by this means you clear out the intestines without much of other purgatives. If you choose you may give a grain or two every two hours, and another purgative at intervals. I do not doubt but the one mode may be as good as the other. Some, in ague, give a grain or two of sulphate of

quinine every one or two hours, and others give a large dose at longer intervals. I am not aware that there is any difference in the general efficacy of the two plans. The one may be as serviceable as the other. In acute dysentery I should trust to loss of blood, clearing out the bowels, and getting the mouth sore; and quieting the spasms by opium exhibited by the mouth and anus; and in the chronic form I should treat the affection antiphlogistically, according to the degree of inflammation which was present, and then employ astringents and opiates. When there is inflammation, I would leech and blister the abdomen. You will find blisters of great use in such a case, but they must not be employed to the neglect of leeches. I should not give mercury at the same time, for I do not believe that mercury is of general use in the chronic form. It was found by Sir James M'Grigor that mercury did harm, unless there was decided inflammation, and I should be afraid of aggravating the disorder and ulceration of the intestines by it. I would rather give astringents and opiates, taking care to use antiphlogistic means as far as they were required.

With regard to astringents—catechu and kino are the best, if they will answer the purpose; but if not, I would use sulphate of copper, but I would not give it unless the case were severe and obstinate, because it is apt to produce sickness, which catechu and kino are not. Most cases of chronic dysentery, however, are severe. Sulphate of copper is a safe medicine, given in the way I have mentioned. You will see several cases of dysentery in the hospital at this moment. It is a rare thing for me to lose a case of chronic dysentery, but when there are a vast number of patients, a man must lose one now and then. Here is a specimen, not of dysentery, but of ulceration of the intestines, in which you will observe there is scrofulous deposit.

CHRONIC GASTRITIS.

Two other cases were presented, illustrating what I have so frequently spoken of this winter—that is, chronic gastritis, a disease which I had no idea when I began to practise was so extremely common. You will recollect, that all through the winter there have been but one or two cases of it in men, while there have been several cases in women. The greater number of instances of the affection occur in young women. You will recollect that all those patients who stayed in so long as I wished them, have done well. The woman to whom I now refer was admitted on the 3rd of November, with pain and tenderness in the region of the heart—pain darting back to the scapula, the patient lying best on the right side. Frequent vomiting, tenderness of the epigastrium, and acidity; sensation of heat within the stomach and up the throat. I believe, in many of these cases, inflammation will extend from the stomach; you have proof of an affection of the heart, because there is frequent palpitation, but now and then I believe it amounts to more than functional disturbance—that you have a real inflammatory state of it, shown by tenderness on pressure, and dry cough. Yet these would make no difference in the treatment. You take blood from the part itself, or from the arm, and the patient will thus do well. The treatment has been the same in every case this winter,—Local bleeding, low diet, with hydrocyanic acid, on account of the dyspepsia, but this will do no good, unless, at the same time, antiphlogistic means are had recourse to.

All the other cases presented this week have been rheumatism, or chronic gastritis, or chronic bronchitis; but as I have so frequently spoken of these affections, it is not worth while to take up your time by detailing the cases.

HYPOCHONDRIASIS.

There was, however, a case of hypochondriasis which went out, and it is rather an amusing one, but in which no good was done. You will recollect that a man came in looking rather sallow, and complaining of general pain in the loins, pain in the feet, pain in the right hypochondrium, pain all over the hepatic region, great lowness of spirits, and pain in the head; but I began to think that if I went on inquiring, he would have every symptom of which I could have asked him. It seemed that he had a great disposition to say "yes" to every question on the existence of symptoms. He had been ill seven months, and said he had chilliness of the back, and that he had had ague. From having the frequent chilliness, as he said, I fancied there might be a little remittent fever. It was possible; for remittent fever will produce great depression of mind, and all these odd sensations. I have cured many such cases by sulphate of quinine. The man had had ague 12 or 15 years ago, and still looked aguish, and as he had chilliness in different parts, I presumed that it was remittent fever. Latterly, however, the hypochondriasis became so very decided, that it would have been absurd to call it remittent fever only. Every day he had some fresh complaints. We have had several patients in the hospital in this state lately. If you ask whether there is a pain in the finger, they tell you "yes, it is very bad; very bad indeed;" sometimes they say that they have great tingling of the scrotum; at

other times that they have great pain of the ancles, and are so weak that it is impossible for them to stand. I know a gentleman now, only 23 or 24 years of age, who cannot be prevailed upon to get out of bed, or if he be got out, he cannot be induced to leave the house. He eats plentifully, drinks plentifully, and reads in bed; but as to getting out of bed, he is quite satisfied that he should never be able to endure such fatigue; he is however fat, and in good condition. This state, I believe, occurs more frequently in women than in men, but I have seen a great many cases of it in men. There is no fancy in all this, and it is hardly possible to make patients believe that their feelings are without foundation. They really feel something, and the mind is in such a state of apprehension that the most alarming impressions are produced from the slightest sensations. In some cases you may make out inflammation, and then you find great benefit by bleeding, purging, and treating it as an inflammatory affection. In other cases there is no inflammation, and the disease is to be treated by an opposite plan. The cause of ague will produce great affection of the mind. Sydenham mentions, for example, *amentia quotidiana* induced by quartan fever. We ought not to say, perhaps, induced by quartan fever, but *malaria*. I know that not only great fatuity, weakness of mind, but these disordered sensations, and the most decided hypochondriasis, will occur in persons who are aguish, or have been subject to remittent fever. I was treating the man with five grains of sulphate of quinine three times a day, when something was ordered to which he would not submit, and he was so satisfied that he was going to die, or be killed, that in the hospital he would stay no longer.

There was a young man in the hospital only last summer in the same condition, but he was cured after bleeding from the head for some time, and then the exhibition of tonics. You find it troublesome to treat such cases; but now and then they may be cured by anti-inflammatory means, followed by and conjoined with the shower-bath and iron.

Hypochondriac Patients.—On one occasion a lady told me that she had not had a stool for thirty-eight years, and wished for something to relieve her, although her bowels were quite regular at the time. * * The medical attendant must not be at all surprised, or put out of temper, on finding that the patient, if wealthy, is in communication with twenty other medical men.—*Dr. Mackintosh.*

CASE IN WHICH THE

RHINOPLASTIC OPERATION

WAS PERFORMED IN A NEW MANNER.

By James Milman Coley, *Esq. Surgeon, Bridgnorth.*

The rhinoplastic operation has, I believe, been attempted in England only by a few of the surgeons in the metropolis, who have sometimes succeeded, and sometimes totally failed. Whether, when successful, they have been more fortunate than some of our continental neighbours in obviating the deformity of a turniplike tubercle, I am uncertain. Having succeeded in renewing a great portion of the nose so completely that the transplanted part cannot be distinguished from the original structure, either in appearance or function, I am induced, through the medium of the widely-diffused Lancet, to present the metropolitan surgeon, as well as the readers of The Lancet in general, with an account of the operation; and as the number of cases has not yet been sufficient to enable the operator to determine whether the more eligible mode of proceeding may be that of applying the cutis in the natural, or inverted, position, I conceive that the publication of every attempt, whether successful or not, will be interesting, until that point can be settled. When proper steps are taken to ensure a free circulation in the flap, I believe the original skin will be always found to have a more natural appearance than that which has been artificially induced upon an inverted integument; and it has been satisfactorily ascertained in other cases, as well as in that I am about to relate, that the long hairs brought down with the skin from the upper part of the forehead, cease to grow in this new and unnatural situation.

Case.—Oct. 12, 1831. W. Bowdler, of Priors Ditton, in the country of Salop, consulted me respecting a carcinomatous tumour which occupied a great portion of one side of the nose. Having advised excision, and the rhinoplastic operation to conceal the deformity and inconvenience which would have followed the loss of nearly half of the organ, I made a triangular incision, which included one of the alæ nasi, nearly all the remainder of the nose on the same side, and a portion of the cheek. The apex of the wound commenced at the upper part of the os nasi, and its base extended an inch and a quarter along the alveolar processes of the os malæ. This mass being removed, one side of the os nasi, and part of the maxilla superior, were laid bare. The hæmorrhage having subsided, I adapted to the edges of the wound, as accurately as possible, a flap of integument inverted from the forehead, and twisted, so that the skin was

made to appear *externally* in its new habitation. The distance of the base of the wound in the face was so great from the forehead, that it was found necessary to include some long hairs on the flap reflected from the latter; the flap was secured by five ligatures, and a little lint, moistened with oil, was introduced within the artificial nostril, a small space being left in the passage for the discharge of blood, or matter.

Oct. 15. The ligatures on the nasal incision were removed.

Oct. 17. The ligatures on the malar side being taken away, perfect union was found to have occurred on both sides. The lint was withdrawn, and oil applied to the ulcerated surface within the new nostril.

Oct. 23. The flap was now detached from the bottom of the incision on the forehead, and as much cut away as was required to enable me to adapt it to the apex of the wound on the side of the nose. This required great accuracy; and the natural appearance of the new part was found to depend much on the care taken in conducting this process. The incised integument was united with the adjoining cheek and nose by a ligature on each side.

Nov. 30. The nose quite healed in every part. Both sides exactly resemble each other, and the artificial ala, having cast off its long hairs, corresponds with the natural one, in figure, size, and office.

During the first week, when the artificial portion of the nose was touched, the patient felt as though my finger had been applied to his forehead. Afterwards this error was corrected; but the sense of touch has not yet become quite so vivid as in that of the opposite side. The temperature of both sides was equal as soon as perfect union had taken place.

Nov. 2. The wound on the forehead was healed, leaving only a slight cicatrix, without any deformity.

Bridgnorth, Dec. 1831.

A THEORY OF DIGESTION.

By HENRY M'CORMAC, M.D.,

One of the Physicians to the Belfast Fever Hospital and Dispensary.

It is now three years since the Editor was so kind as to give insertion, in his valuable Journal, to some remarks which I had made on digestion, in which I had endeavoured to show, that the generally-prevailing opinions on that subject were not entirely in accordance with fact. It was then my intention to have shortly after drawn out a statement of what my own opinion was, accompanied with a detail of such experiments, and other proofs, as I might conceive would bear on the question. I did project and carry on some experiments, but I could get no further than two dogs, having experienced too much pain in destroying them to wish to do so with any more.

It is conceived at present, that after the food is swallowed, a fluid peculiar to the stomach, called the gastric juice, independent of saliva and other mucosities, dissolves it, as a preliminary step to further digestion. Now, the opinion which I have been led to adopt is considerably opposed to this. I am inclined to believe that there is no fluid possessing the properties attributed to the gastric juice, and consequently that there is no gastric juice so described; and that while the only fluids which act on the food which are not contained in the food, are the saliva, œsophageal, and gastric secretions, whether mucous or serous, and occasionally a little bile, so the only action which these exert, is the slightly solvent one of a simple mucous fluid, aided by the heat of the stomach.

When we examine the fluid contained in the stomach of a man, or one of the inferior animals, after death, where a fluid is present, what do we find? A liquid of various colours, flavours, and degrees of spissitude; sometimes acid, at other times insipid; now turbid, again transparent like water. Upon opening the stomach when solid food is contained in it, we not unfrequently find no fluid mixed with it at all, showing that the presence of a distinct fluid of any kind is not necessary to digestion. A person will, on the other hand, take copious draughts of water or ale during meal-time without injuring digestion, which process, if it depended upon *the* gastric juice, must have been suspended by the dilution of that fluid; we find however no such result. A healthy person may drink with perfect impunity during his meals; nay, one meal, our breakfast, uniformly contains a large portion of fluid. There seems to be no common character exhibited by the fluid contents of the stomach, and if this be true, what becomes of *the* gastric juice? Shall we not be forced to admit with Majendie, that there are several gastric juices, to all appearance essentially distinct from each other, yet all of them gastric juices, and possessing peculiar powers apart from all ordinary liquids, in dissolving vegetable and animal fibre? Now does it not seem an absurdity to admit that there are different gastric juices, yet all possessing an unknown something, which endows them with a common property, which however the senses cannot detect? But admitting one or many gastric juices, I would ask, What is this something? Is it an acid, or an alkali, or an unknown and intangible entity, only to

be inferred from its results. There is no proof that it is an acid or an alkali, consequently if it exist it must arise from something which nobody has yet been able to detect, and which never will be detected, inasmuch as it does not otherwise exist in nature. I conceive that the hypothesis of a gastric juice, such as it is described to be, is quite insufficient to account for the phenomena of digestion, unless by running us into inextricable contradictions and positions of fact. We find that shortly after a meal is swallowed, the coats of the stomach, when they are in a healthy condition, contract strongly round the food. That this is the case is unanimously recorded by all observers, whether on man or brute; and I remarked it myself in the case of the two dogs. It would seem that a fluid is not locally concerned in the act of digestion, for it is a well-known fact that fluids of all kinds are quickly absorbed when they get into the stomach, leaving the solid food not more than moist. Those who doubt this may ascertain by direct experiment, whether or not the presence of a free fluid be necessary during the act of digestion. I have frequently seen the bodies of herbivorous animals opened after slaughter, and found the coats of the stomach containing food strongly contracted, and the food itself barely moist.

The functions of the absorbents are enveloped in considerable obscurity. I would ask, for instance, Do the same class of absorbents, whose mouths terminate in, or on, the inner membrane of the intestines, absorb aqueous fluid as well as chyle, or are there two separate classes of absorbents for this purpose? That there is but one will, I think, be generally admitted. Now we find that the absorbents terminating on the inner surface of the stomach do absorb moisture. And why not solid substances? This then would be a further datum for experiment. Let a dog be kept fasting for a certain number of hours, or until his stomach is empty. Let him then receive a quantity of beef and water, which shall have been previously weighed. After some hours, or, so far as it can be ascertained, just before the pyloric orifice opens, let him be killed, and the contents of the stomach again weighed, and if my two experiments have not deceived me, the free water will have entirely, or very nearly, disappeared, and the quantity of beef be found much lessened. To determine with accuracy the absorption of food from the stomach, hot water alone would require carefully-repeated experiments. In these the abdomen might be opened, and the duodenum loosely tied at its insertion into the stomach, so as to preclude the possibility of food passing from the latter. Such an experiment would not, it is to be presumed, interrupt digestion in vivacious animals.

In all inquiries hitherto made into the nature of digestion, it has been assumed that the solid food introduced into the stomach was first dissolved and reduced into a liquid or pultaceous state, and that it subsequently passed in, entirely, into the small intestines, where the nutritive portion was absorbed by the lacteals. But if it can be shown that the contents of the stomach are nearly free from moisture during the act of digestion, that they are only very partially reduced to the fluid state, and that they are not entirely sent into the small intestines, this hypothesis must fall to the ground.

I shall now state in what I conceive the digestive process in reality to consist. The mucous membrane of the mouth, œsophagus, stomach, as well as of the other intestines, gives out a mucous and a serous fluid (Adelon), which two fluids are essentially alike throughout. Upon examining the mucous membrane lining these viscera, we find no variety of structure adequate to account for the production of a third fluid, or one possessing the alleged properties of the gastric juice of physiologists. The structure of the mucous coat of the intestinal canal is nearly alike from one end to the other, and the same fluids are secreted during its whole course. Any difference that does exist in this structure relates to certain mechanical arrangements of folds, valves, muscles, and dimensions; and it will be admitted that neither this, nor the greater or less amount of absorbent vessels, nor the presence of the salivary, pancreatic, and biliary secretions, have any obvious connexion with the existence of the celebrated gastric juice. The saliva, the mucous and serous secretions already stated, those from the salivary, hepatic, and pancreatic glands, are, with the addition of our drink, the only visible fluids, to the solvent action of which our food is subjected. And what is this action? Nothing more than that which such a bland mixed fluid might, *à priori*, be expected to possess, aided by gentle agitation, and a temperature of 93° or 100° of heat. It seems to me that no proof has as yet been given of the existence of the gastric juice of physiologists, that should compel us to dissent from the testimony of our understanding and senses. For, is it not to gainsay the evidence of both, to attribute such powers to an almost inert fluid, as have been attributed to the gastric juice? But certain phenomena occur. No one can deny that, nor do I. Yet I would say that the phenomena to which I allude are not produced by a gastric juice. A gastric secre-

tion or juice, if we still prefer using this quaint term, exists, and certain phenomena also exist; but this secretion, and the phenomena in question, are not a natural sequence; in other terms, they do not stand in the order of cause and effect.

The principal use of the saliva seems to be that of rendering the food more easy of mastication, that of the œsophageal fluid to lubricate its passage, and that of the gastric, when required, to keep it sufficiently moist. The action of these fluids is purely mechanical, or, at all events, they possess no solvent properties that heated milk, or any other bland liquid, would not also exhibit.

When food is received into the stomach, that organ, by the aid of its muscles, adapts its capacity to the amount of its contents; the watery contents are immediately taken up by the absorbents, *which also begin to act upon the solid food*. This then is the key to the supposed solvent powers of the gastric juice. By the constriction of the stomach, the mouths of its absorbents are brought in immediate contact with the food, of which a portion is taken up; the remainder passes into the duodenum, when the same process is continued; and so on, until the useless remainder is expelled. Whatever alteration, then, has been effected in the food while in the stomach, whether in disintegration of texture, or diminution of substance, independent of the very limited action of the bland fluids already spoken of, arises from the action of the absorbents. This view of the case does away with the contradiction involved in supposing that a fluid, at least as inert as water, could produce such anomalous and extraordinary result.

We do not require a gastric juice in the duodenum, where the food, vegetable food especially, sometimes passes in unchanged portions, as I have often had occasion to witness. But it may be replied that solid food is never absorbed in the small intestines, when the food is only taken up while in the fluid state. Is it not, however, unreasonable to deny the power of absorbing solid food to the absorbents of the stomach and intestines, when we find that the absorbents in other parts of the body are capable of taking up the very bones. Surely this is an analogical argument, if indeed, in point of proof, it does not amount to absolute identity of reasoning. We find a class of vessels in every part of the body, by which every part is in turn removed, and why not admit that the same, or at least a very analogous description of vessels, exercises a similar power of acting on the food in the stomach, the more so when it will save us from falling into the extravagant hypothesis of an inert fluid, yet omnipotent solvent. An analogy of so close a nature would surely hold good in any line of reasoning *out* of physiology, and why not *in* physiology? We do not find that trees have a gastric juice to enable their roots to take up their nourishment, so far as it is derived from the earth. No supposition seems to me so simple, easy, and satisfactory, as that which accounts for the principal changes which the food undergoes in the stomach by the action of the absorbents. If such a supposition be in accordance with truth, as I at present believe it to be, then the hypothesis of the gastric juice must be allotted a place among other exploded notions of by-gone days.

No artificial solvent that living animal fibre could bear the contact of, could possess have the solvent properties of this (*if* I may be permitted to call it so) imaginary fluid. It dissolves, as it is said, fat like an alkaline ley, and bones like muriatic acid; yet it is neither an acid nor an alkali, but a bland, compound mucous fluid. Fish, flesh, and fowl, roast and boiled, cooked and raw; substances, whether animal or vegetable, are all attacked by it in the same, or different, animals, with equal facility, while all the while there is no gastric juice, except in those imaginations which could endow a fluid having less than the solvent properties of water, with such opposite and contradictory properties. But this is always the nature of hypothesis; the first framers are blinded in the operation, and reiterated assertions blind their successors. And here I candidly make to all whom it may concern, the fullest admission of my own fallibility. What opinion, however, can be so absurd, which a series of asseverations will not convince thousands to be true; yet what opinion can be more absurd than that which gives attributes physically impossible, to a bland mucous fluid? There is no such fluid as the gastric juice, not meaning by this the mixture of serous and mucous secretions and swallowed drinks, which are sometimes found in the stomach, but the wonderful gastric juice of the physiologists; and it is impossible that there could be such a fluid, so long as the present laws of organic and inorganic existence continue the same. I cannot but think that the period is not far distant, when such an opinion will be treated as a chimera, as in truth it deserves to be.

I have taken considerable pains to ascertain the truth on this subject. I have looked over the works of such of the English, German, and French physiologists, as are here accessible to me; have experimented; conversed with able anatomists on the subject of the old hypothesis; have reflected on it by myself; have laid it aside and taken it up again, unwilling to believe that the world was wrong; yet my delibe-

rate and apparently firm conviction is, that in attributing such powers to the fluid found in the stomach, called the gastric juice, and made up of saliva, drink, bile, and the mucous and serous secretions of the mucous coat of the mouth, fauces, œsophagus, and stomach, we are committing a serious error, inasmuch as the powers thus attributed to the gastric juice, are passed by the absorbents terminating on the inner surface of the stomach.

I have taken the fluid remaining in the stomachs of two persons immediately after death, and immersed small portions of various kinds of food in it for many hours at a temperature of 98°, while, at the same time, I exposed like fragments to the action of broth, milk, and water, similarly heated, but I could find little change experienced by any of them, showing that mere maceration is not the digestive process. Spallanzani and others have swallowed, and made men and animals swallow, perforated balls of silver, containing food of various kinds which was said to have been dissolved. It is not easy to analyse experiments so indefinitely described as they have been. Had the actual results been accurately stated, I feel convinced that no conclusions that might be drawn from them, would prove adverse to the theory which I have just proposed, but the contrary. If I could, I would ask the performers of such experiments, Were the balls which you swallowed very small? Was the food introduced through the holes in the balls, or by unscrewing a pair of hemispheres? and, finally, I would ask, Were not the holes in the balls large enough to permit the food to be washed out by the liquids they might come in contact with, or thrust out by the pressure of other aliments? If such balls were thin, as they probably were, I may add that the action of the extremities of the absorbents through the holes contained in them, would assist the other causes already mentioned in diminishing their contents.

Perforations have taken place in the stomach both before and after death; the latter have been attributed to the action of the gastric juice. But similar perforations have been found in every portion of the intestinal canal; it could not be alleged that the gastric juice caused the perforations which were met with in the colon. If not, what did cause them? The same cause, I would answer, which produced them in the stomach,—inflammation during life, and maceration and putridity after death. May we not suppose, however, that the absorbent vessels sometimes continue in action after death, and thereby produce restricted perforations? We know that other functions in the extreme vessels do not terminate immediately with death. If the gastric juice be the cause of the perforations and erosions as they are called, which we sometimes witness after death in the stomach, why do we not uniformly find them in the stomachs of criminals or others who have experienced a violent death? A recent experimenter relates, that when he hung up rabbits after death, he found the pendent portion of the stomach in a state of erosion. How many hours did this require? Has the experience of rabbit-butchers been appealed to on the subject? If such facts were substantiated, and if it were also proved that they were not cases of putrefactive maceration, I would ask an explanation of the case from those who say that the gastric juice of herbivorous animals is incapable of dissolving flesh, and *vice versa*.

I may be asked to point out the influence of the nerves in digestion, or whether they have any influence. Certainly, I would reply, the presence of the branches from the eighth pair, and solar plexuses of the sympathetic, are essential in digestion, just as the nerves are necessary everywhere else to the performance of the respective processes of the parts to which they are distributed. They can have no specific or peculiar power in promoting digestion, beyond presiding over the various acts of secretion, absorption, circulation, sensation, and motion, which constitute the functions of the stomach.

As a summary of the preceding I would say, there is no gastric juice so called, because the fluid existing in the stomach is a compound, and because, while the powers attributed to the gastric juice, are contrary to the evidence of our senses, the changes which the food undergoes in the stomach, apart from the slight action of moisture and heat, are more reasonably referred to the action of the absorbents terminating on its inner surface—a process probable in itself, while it is analogous to the action of the absorbents in other parts of the body, but rendered certain by the absence of every other adequate agency.

In giving expression to the preceding statement of opinion, I only assert my own conviction. If it should prove true, I shall feel happy in having helped to drive another error out of the world; if the contrary, I shall as cheerfully relinquish my own error.

Belfast, December 5, 1831.

Abstinence.—It is impossible to refer to abstinence as a remedy in disorders of the stomach, without recalling to mind the services of M. Broussais. The *diete absolue*, or extreme abstinence, recommended by him in gastritis, is a far more appropriate remedy than the drastic purges too much employed in this country.—*Cyc. Prac. Med.*

THE LANCET.

London, Saturday, December 31, 1831.

THE work of destruction has commenced.—A *Theatre of Anatomy* has been razed to the ground. The scene of the outrage was Aberdeen, and the day on which it was perpetrated, Monday week. How often have we predicted in the pages of this Journal that English Lecturers on Anatomy would have to flee before an indignant populace! The facts connected with the riot at Aberdeen may be thus briefly stated. At about two o'clock, on the day above mentioned, two boys, whilst playing near Mr. MOIR'S Theatre of Anatomy, observed a dog dig up a portion of flesh from some earth which had been recently moved. Their curiosity being excited, the boys examined the fleshy substance, and discovered, to their horror, that it was a portion of a human body. The alarm, once given, immense crowds began to collect. Two lads, the apprentices of a baker and a bricklayer, now rushed into the Theatre in pursuit of Mr. MOIR, who, fortunately, was enabled to escape through a window. The number of the multitude continuing to increase, a cry was raised for the destruction of "the Burking shop," and, subsequently, the Theatre was entirely destroyed by fire, the walls being afterwards undermined and pulled down, "so that," says the Aberdeen paper, "we may literally state that not two stones were left one on another." Three dead bodies, partly dissected, were removed by the populace, and carried through the streets, so imperfectly covered that portions of the dissected limbs were exposed to general view—a spectacle which added not a little to the fury of the enraged assemblage. Two medical students, having been discovered, were chased by different branches of the crowd, and having escaped into some neighbouring houses, the places were threatened with destruction, and doubtless would have been destroyed, had it not been discovered that the students were enabled to make their escape through some windows at the rear of the dwellings.

Such is a brief statement of the prominent facts of a catastrophe which has just occurred in the "ancient" University of Aberdeen, and, when we reflect upon the recent disclosures connected with the "*Burking*" system, is such a circumstance calculated to produce within us a feeling of astonishment? It is painful to make such an acknowledgment; but we should conceal the truth were we to assert that astonishment would not have been excited in our minds, had every Theatre of Anatomy been destroyed within the last month. The atrocities of the *Burk* and *Bishop* gang have no parallel in the annals of crime; but, we ask, Had not those murderers associates in crime?—In fact, were not Theatres of Anatomy, to use an expression of the Aberdeen multitude, the "*Burking shops*" in which were *bought and sold* the lifeless victims of their avarice? The people are not blind, they are not mad; neither are they stupid; but they have learnt one of two things—that, if the dissection of the dead cannot lead to the discovery of murder, the value of the process is sadly overrated, or that the anatomists are not less guilty than the felons themselves, if they have concealed the crimes. At this hour of feverish excitement, there is no mechanical labourer, however humble his occupation, who does not reply to the alleged usefulness of dissection, by referring to the horribly multiplied facts in which it has been proved that the most skilful anatomists have failed to discover the cause of death, although that cause was one of wilful violence. This, therefore, is not the time to *reason* with the people; discussions upon the question, either in or out of Parliament, can at such a moment have little or no avail; and the arguments which might at other times make their way to the

judgment, are now stemmed off by a torrent of prejudice—ay, and sometimes of well-founded prejudice too, which it is impossible to overcome. It is alleged that the poor are more deeply interested in the question than any other branch of the community. We admit the *fact*, but we reject the reasoning which is founded upon that fact. The poor are more deeply interested in being enabled to purchase *cheap bread* than any other branch of the community. But *have* they cheap bread? No. On the contrary, are there not taxes laid upon corn to prevent them from purchasing cheap bread? Yes. Then how can the poor people believe that those persons who support the corn laws, which prevent the labouring classes from possessing cheap bread—how can they believe in the sincerity and disinterestedness of those very individuals, when they affect to support the science of anatomy, because it may confer great benefits on the poor? The people, we repeat, are not blind, stupid, or mad, and they prefer a bungling operator to a skilful "Burker." And who can blame them for the choice? "Oh!" the traders in anatomy will exclaim, "the people are deceived,—they know not what is good for themselves. The people are too ignorant to think rationally, and the legislature, in its benevolence, is called upon to make laws for the benefit of the people, even in opposition to their own wishes." But what advantages attend a life of hunger? The labouring classes *do* appeal with bended knee and uplifted hand, for bread for themselves and children. And how is that appeal answered? By imposing a tax upon foreign wheat! If, then, there exist so strong a desire to "remove the causes of *suffering*" amongst the poorer classes,—why, we ask, is *science* forced upon that branch of the community while *food* is as strongly withheld? The whole may be explained in these words. Simply, because the laws relating to the members of the medical profession, as well as the laws affecting the poorer members of the community, have been enacted and enforced, during the last forty years, by a series of boroughmongering governments, and their offsets in corruption—a monopolising batch of boroughmongering medical corporations.

Taking this view of the question, an involuntary feeling of indignation arose in our minds, when we heard that the Council of the Lincoln's-Inn-Fields College had *memorialised* the Home Secretary, lamenting the "unfortunate situation" in which they were placed by their charter. In the course of our time we have heard of many insolent acts, of many audaciously impudent proceedings, but never have we met with a parallel to this act of memorialising by the JUNTO; but we must defer our exposure of their participation in the burking system until next week, having, on this occasion, a much more important duty to perform—namely, the insertion of Mr. WARBURTON'S new "Anatomy Bill." We say an "important duty" on two grounds—first, because it is quite evident that the Bill has been framed with the best *intentions*; and, secondly, because it proposes to confer no NEW *powers* upon the hypocrites who are placed in such an "*unfortunate* situation" by the conditions of their charter. Upon this point, however, we must not be misunderstood. The Bill is not a perfect document; on the contrary, in some respects it proposes more than should be contemplated by it; and it is characterised besides by one fatal omission; nevertheless it is preferable to the Bill which was rejected by the Lords, and it is so far a satisfactory document, that it indicates *good intentions* on the part of its author Mr. WARBURTON. In placing it before our readers, we shall, for the convenience of reference, number the clauses, and shall attach to each section such remarks as may appear called for; in every instance, however, they shall be compressed into as short

a space as may be consistent with a due comprehension of the arguments which it may be our object to enforce. In order to avoid confusion, and that the Bill may be considered as a whole, we must request the reader to go through the entire of the paragraphs numbered and placed within inverted commas, before he proceeds to examine any portion of the commentary.

A BILL

FOR REGULATING

SCHOOLS OF ANATOMY.

["Note.—The words printed in *italics* are proposed to be inserted in the Committee."]

I. "Whereas a knowledge of the causes and nature of very many diseases which affect the body, and of the best methods of treating and curing such diseases, and of healing and repairing divers wounds and injuries to which the human frame is liable, cannot be acquired but by anatomical examination; And whereas therefore it is highly expedient to give protection, under certain regulations, to the study and practice of anatomy; be it therefore enacted by the King's most excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, that it shall be lawful for his Majesty's principal Secretary of State for the time being for the Home Department, on the *first day of* in every year, or within fourteen days then next following, to appoint not fewer than *three* persons to be, during *one year*, Inspectors of places where anatomy is carried on; and as often as any of the Inspectors to be appointed as aforesaid shall die, or shall refuse or become unable to act, to appoint another person to be Inspector in the room of every Inspector who shall die, or shall refuse or become unable to act."

That it is "highly expedient" to promote the cultivation of the science of anatomy we cheerfully admit, but if Mr. WARBURTON be required to substantiate the first portion of his preamble, we know not where he can seek for his evidence with any hope of success. A "knowledge of the *causes* of disease" is not to be acquired in the dissecting-room of the *trading* anatomist; neither will the dissection of the bodies found there show in what manner diseases may be treated scientifically. Not one body in a hundred is seen, before death, by the anatomist or his pupils; hence the morbid appearances seldom, if ever, furnish any useful practical lessons. No, no. The dissecting-room of the "school of anatomy" furnishes no knowledge of the *causes* of disease, neither does it show, equally with the opportunities of the hospital "dead-house," how dangerous maladies may be best combated. In other words, the demonstrations in the regular dissecting-room must be regarded only as the means of conveying accurate information as to the *normal condition* of the various structures of the human body. On the contrary, in the "dead-house" of the hospital—the place so perpetually forsaken by the never-ceasing praters about the utility of the science of anatomy—in the dead-house, we say, are to be found all those prominent traces of disease which give birth to the symptoms under the immediate cognizance of the students before the decease of the patient. Here it is that the inquirer has the means of forming a correct estimate of the value of therapeutic agents; here it is that he may learn why medicines failed, why pain raged, why death triumphed; for no sooner does he behold the inflamed or water-sodden brain—the blood-engorged or serum-enveloped lungs—the poisoned stomach, or hypertrophied heart—than he at once connects the symptoms which he observed at the bed-side of the patient with the morbid changes exhibited on an inspection of the body, and thus he collects from the best, the only, sources, that "knowledge" which throughout life enables him to discharge his professional duties, far remote from the dark regions of uncertainty and empiricism.

"INSPECTORS."—The Bill provides, that the Secretary of State shall appoint "not less than *three* Inspectors" of Anatomy. Now, really, we should be glad to learn, of what earthly use can be such officers? Yet

this is the great protecting power contemplated by the Bill. "Not less than *three* Inspectors?" We should think not, truly, seeing that in another clause of the Bill it is provided, that any surgeon engaged in dissecting a body must give notice of that circumstance to the Inspector of his district. Would an Inspector for each *county* be sufficient? Certainly not,—that is, to make him a really efficient and useful officer. If an Inspector were resident in every county-town, for example, how could such an officer act as a protector to the public in places remote from his residence? The office would be altogether useless, as every power intended to be conferred by the Bill upon the "*Inspector*," might, with much more propriety, be thrown into the hands of the ordinary magistrates. We do hope and trust that the public will not be saddled with the expenses of some fifty or a hundred offices, which cannot diminish in the smallest degree the number of those crimes which it is the object of the Bill to prevent. Relying upon Mr. WARBURTON'S good intentions, we are anxious to impress upon the mind of that gentleman, that there would be great folly in his pressing for the enactment of this part of the Bill. Does not the honourable gentleman himself perceive, that the man who would dare to purchase a dead body under suspicious circumstances, would also dare to refrain giving "notice" of his guilt to the "Inspector" of his district? But possibly Mr. WARBURTON apprehends that the power held by the Inspector, to examine places in which anatomy may be carried on, might act as a sufficient check in preventing the dissection of illegally-acquired subjects. Then, we repeat, give that power to the magistrates, or to officers connected with the New Police, who are much more numerous than can be any body of Inspectors created by the Home Secretary. And having also at their disposal a great number of officers, who are paid by the public, they might discharge this additional duty without imposing any additional tax upon anatomists or medical students, or without fixing any new burden upon the county rate. Mr. WARBURTON'S proposal is, in fact, a scheme for throwing the right of searching the houses of anatomists and skilful surgeons into the hands of a new class of officers; but as magistrates already possess the right to search all the houses in the kingdom under the sanction of search-warrants, no earthly advantage can be gained by placing this power at the disposal of individuals who will not have half such opportunities of putting it in force as the public officers by whom it is already exercised. If it be argued *contra*, that magistrates have only a right to issue search-warrants upon the oath of a complainant or informer, whilst the "Inspector" is to be armed with power to enter the suspected premises, by merely producing an "order" from the Secretary of State, our reply is simply this:—Place in the hands of the *magistrate* that "order" which it is now intended to give to the "*Inspector*," and thus even greater protection for the public than is contemplated by this part of the Bill would be effectually secured, with this advantage—no additional expense to the public.

"II. And be it enacted, that it shall be lawful for the said Secretary of State to direct what district of town or country, or both together, with the places where anatomy is carried on, situate within such district, every such Inspector shall be appointed to superintend; and the times and place or places when and where, and in what manner, every such Inspector shall transact the duties of his office; and that the name of every Inspector so appointed, and the district which he is appointed to superintend, and the times and place or places when and where he will transact the duties of his office, shall be published from time to time, as occasion may require, in the London Gazette."

What has already been stated, in our remarks on the first clause, will prove, we hope, that the enactment of *this* clause is unnecessary. The appointment of an

"Inspector," with a view to prevent physicians, surgeons, and apothecaries, throughout the kingdom, from receiving for dissection bodies which may be illegally acquired, resembles a proposal for placing an officer at the door of every tradesman, in order that he may be prevented from receiving smuggled goods. Upon reconsidering the subject, Mr. WARBURTON's own strong sense of right will induce him to abandon such an absurd and utterly inefficient expedient.

III. "And be it enacted, that not fewer than *one* of such Inspectors shall reside in London, and there transact the duties of his office; and that not fewer than *one* of such Inspectors shall reside in Edinburgh, and there transact the duties of his office.

IV. "And be it enacted, that every Inspector to be appointed by virtue of this Act shall receive the returns and certificates hereinafter directed to be delivered to such Inspector by all persons practising anatomy within the district which such Inspector is appointed to superintend; and shall keep an account of all such returns and certificates; and shall inspect and inquire into the condition of any place where anatomy is carried on, which the said Secretary of State may order such Inspector to inspect.

V. "And be it enacted, that it shall be lawful for every such Inspector to visit and inspect, at any time, any place where anatomy is carried on, on the production by such Inspector of a written order signed by the said Secretary of State, directing such Inspector to visit and inspect such place.

VI. "*And be it enacted, that it shall be lawful for the said Secretary of State to allow to every such Inspector such salary for his trouble, and such a sum of money for the expenses of his office, as to the said Secretary of State shall appear reasonable; and that an annual return of all such allowances shall be made to Parliament.*"

All these clauses still refer to the office of "Inspector." Not one fact, however, is stated to show how such an institution can act beneficially. Surely the "returns" might be forwarded to the magistrates, or to the commissioners of police, thi was great a hope of advantage as to the Inspector of a district; neither would it be a severe additional labour imposed upon the clerk of the magistrate to file such "returns," or to register them in a book kept for such purpose. Of the "order" from the Secretary of State, and of another tax upon the public, in the shape of an "*allowance*" to the Inspector, we have already spoken. The whole of the preceding clauses might be expunged without detracting from the utility and efficacy of this or any other Bill which may be introduced into Parliament with a view to promote the cultivation of anatomy, and protect the public from the *Burk* and *Bishop* murders.

VII. "And be it enacted, that it shall be lawful for the executor or administrator of any person deceased, or for any party having lawfully the custody of the body of any such person, with the consent of the nearest known relative of such person, to permit the body of such person to undergo anatomical examination; unless to the knowledge of such executor or administrator, or of such party, such person shall have expressed his desire, either in writing at any time, or orally in the presence of one or more witnesses, that his body after death may not undergo such examination."

The concluding part of this clause is calculated to attract much attention; it has evidently been framed with a view to dispel the hostile feelings of the poor by making it a matter of choice, whilst living, whether their bodies shall, or shall not, be the subjects of anatomical investigation after death. Should they express a wish that the process of dissection may not be instituted upon their bodies, then it is to be unlawful for the person having legal custody of the body, to hand it over to the anatomist; but the clause inflicts no penalty for disobedience, so that in its present shape it would be inoperative. Should this section of the Bill be strengthened by connecting with it a severe penalty for a violation of its commands, this one clause may prove a greater obstacle to an adequate supply of subjects for dissection than all the combined obstacles now existing. *En passant* we may remark, that the Bill is *particularly* sparing in the imposition of penalties. Now of the first part of this

clause, that—"It shall be *lawful* for the executor or administrator of any person deceased, or for any party having lawfully the custody of the body of any such person, with the consent of the nearest known relative of such person, to permit the body of such person to undergo anatomical examination." Here we have some traces of that rock which has wrecked nine-tenths of the tiny reasoners on this question. It is unblushingly alleged, by the trading anatomists and their coadjutors, that the practising of dissections is an offence subjecting the parties to a criminal prosecution, whereas nothing can be more false. The *Times* of Thursday, in a brief laudatory article upon the *memorial* of the College of Surgeons, echoes the absurdity in its peculiar tones of borrowed "thunder," yet this same *Times*, within the last week or ten days—not knowing how many hundreds have done the same thing, has innocently enough informed the public that "several philanthropic gentlemen" have selected the columns of that journal for making it known to the world that they had bequeathed their own bodies for dissection, thus showing, in their extreme love for science, that they had the utmost disregard for the feelings of surviving relatives.

But in what consisted the "philanthropy" or patriotism of the persons who had bequeathed their bodies for dissection, if the will of the testator cannot be carried into effect owing to the penalty of a criminal prosecution? Yet, quoth the *Times* of Thursday, "it is truly (falsely) observed by the council (Precious *junto!* Would that the *Times* and public were as well acquainted with them and their proceedings as are the profession and ourselves!) that, by the present state of the law, the anatomical student cannot, without a *crime*, have a dead body in his possession to dissect." *What* crime? We call upon the *Times*, we call upon Mr. Warburton, we call upon the Council, we call upon the trading anatomists, to point out the law which renders it criminal for *any* man to have in his possession, for the purpose of dissection, a dead body, of which he may become lawfully possessed. Let them prove that there exists such a law; then we will admit that the clause last quoted may become an essentially valuable section of an Anatomy Bill, and we will acknowledge also that they have written, on this question, something more than the merest, the veriest, twaddle. Of what use, we say, is it to give bodies for dissection, if they cannot be dissected? But the whole statement is sheer, unqualified, nonsense; or rather it is so mixed up with arguments founded upon falsehood, that it has proved exceedingly pernicious to that question which the great body of the profession are so disinterestedly and judiciously advocating. We repeat, that it is already lawful for persons having the unquestioned legal custody of dead human bodies, to give them up for dissection, and it is already lawful for anatomists and other persons to dissect such persons, when placed at their disposal by the lawful possessors.

The first portion of this clause, therefore, had better be erased altogether, and the concluding part may as well be expunged if there be not the restraint of a penalty imposed on persons who may have a strong motive for violating its conditions.

VIII. "Provided always, and be it enacted, that in no case shall the body of any person be removed for anatomical examination from any place where such person may have died, unless a certificate, stating in what manner such person came by his death, shall, previously to the removal of the body, have been signed by a medical man who attended such person during the illness whereof he died; or if no medical man attended such person during such illness, then by some other medical man: and that in case of such removal, such certificate shall be delivered, together with the body, to the party receiving the same for anatomical examination."

It is quite right that bodies should not be removed, or received, unless under the sanction of certificates granted by medical

practitioners; but Mr. WARBURTON should recollect that "the cause of death" cannot, in numberless instances, be ascertained without a minute examination of all the great important organs of the body, which, as one of the clauses expresses it, would be "carrying on anatomy," and require the superintendence of the "Inspector." The bare proposal of the *certificate* is a good one, and may be adopted with effect.

IX. "And be it enacted, that it shall be lawful for any graduate or licentiate in medicine, or any member or fellow of any College of Surgeons, or any professor, teacher, or student of medicine or surgery, to receive or possess for anatomical examination, or to examine anatomically, the body of any person deceased, provided the party having lawfully the custody of the body, with the consent of the nearest known relative of such person, have permitted the body to undergo anatomical examination; and provided such person shall not, to the knowledge of such executor or administrator, or of such party, have expressed his desire, either in writing at any time, or orally in the presence of one or more witnesses, that his body after death may not undergo such examination; and provided such certificate as aforesaid shall have been delivered, together with the body, to the person receiving the same for anatomical examination."

The substance of this clause has been considered in the remarks offered upon clause VI.

X. "And be it enacted, that every party receiving the body of any person deceased for anatomical examination, if the body be removed for such examination from the place where such person died, shall demand and receive, together with the body, a certificate as aforesaid; and if an Inspector shall have been appointed to superintend that district, in which is situated the place where such party received the body, shall, within *twenty-four* hours next following the hour at which the body was received, transmit to such Inspector the certificate received together with the body, and also a return, stating at what day and hour, and from whom, the body was received, the date and place of death, the sex, and (as far as is known at the time) the Christian and surname, age, and last place of abode, of such person; and that every party receiving a body for anatomical examination, shall enter, or cause to be entered, the aforesaid particulars relating to such body, and a copy of the certificate be received together with the body, in a book to be kept by him for that purpose, and shall produce such book whenever required so to do by any Inspector so appointed as aforesaid, authorised to inspect the same by a written order signed by the said Secretary of State; and shall permit any such Inspector to inspect and visit every place where anatomy is carried on by such party, on the production by such Inspector of a written order signed by the said Secretary of State, directing such Inspector to visit and inspect such place."

In conformity with the provisions of this clause, a surgeon, residing thirty miles from the county town, must send to the Inspector of the district within twenty-four hours after he has become possessed of a dead body for dissection. We ask again, would not a notice to the nearest Magistrate offer more security to the public, whilst it would be attended with much less inconvenience and expense?

XI. "And be it enacted, that no graduate or licentiate in medicine, nor any member or fellow of any College of Surgeons, nor any professor, teacher, or student of medicine or surgery, shall be liable to any prosecution, penalty, or punishment for receiving or having in his possession any dead human body for anatomical examination, or for examining anatomically any dead human body, or for any offence against this Act, unless the prosecution shall be instituted by the Attorney-General, or by leave of the Court of King's Bench, if the alleged offence whereof the party is accused shall have been committed in England, nor unless the prosecution shall be instituted by the public prosecutor, if the alleged offence whereof the party is accused shall have been committed in Scotland."

This is an exceedingly *curious* clause. Parties having in their possession, for the purposes of dissection, *any* dead human bodies,—whether those of murdered persons or not,—cannot, in strict accordance with the terms of this section, be subjected to punishment, unless the prosecution be instituted by the Attorney-General or the Court of King's Bench.

XII. "And be it enacted, that nothing in this Act contained shall be construed to extend to or to prohibit any post-mortem examination of any human body, required or directed to be made by any competent legal authority."

It is to be hoped that not *any* of the "post-mortem examinations," as now instituted and conducted by medical practitioners, will be prohibited, or in the smallest degree obstructed.

XIII. "And whereas an Act was passed in the fourth year of the reign of his late Majesty, for altering and amending the laws and usages relating to the interment of the remains of persons against whom there should be had a finding of *felo de se*; and whereas another Act was passed, in the ninth year of the reign of his late Majesty, for consolidating and amending the statutes *in* England relative to offences against the person; by which latter Act it is enacted that the body of every person convicted of murder shall, after execution, either be dissected *or* hung in chains, as to the Court which tried the offender shall seem meet; and that the sentence to be pronounced by the Court shall express, *inter alia*, that the body of the offender shall be dissected or hung in chains, whichsoever of the two the Court shall order; be it enacted, that so much of the said last-recited Act as authorizes the Court, if it shall see fit, to direct that the body of a person convicted of murder shall after execution be dissected, be, and the same is hereby repealed, except so far as so much of the said Act may repeal the whole or part of any other Act or Acts.

XIV. "And be it enacted, that the body of every person convicted of murder shall, after execution, either be hung in chains, or be buried on the highway, after the manner in which, before the passing of the said first-recited Act, the bodies of self-murderers were wont to be buried, as to the Court may seem meet; and that the sentence to be pronounced by the Court shall express, *inter alia*, that the body of the offender shall be hung in chains, or buried on the highway, after the manner aforesaid, whichsoever of the two the Court shall order."

These two last clauses are admirable, and, if carried into effect, will tend incalculably to remove those prejudices which are entertained by a large portion of the public against a process, which, although harmless in itself, has hitherto been inflicted on the worst of criminals, as the last mark of human degradation.

XV. "And be it enacted, that if any action or suit shall be commenced or brought against any person for any-thing done in pursuance of this Act, the same shall be commenced within six calendar months next after the fact committed; and the defendant in every such action or suit shall and may, at his election, plead specially or to the general issue, Not Guilty, and give this Act and the special matter in evidence at any trial to be had thereupon, and that the same was done in pursuance and by the authority of this Act.

XVI. "And in order to remove doubts as to the meaning of certain words in this Act, be it enacted, that the words "person and party" shall be respectively deemed to include any number of persons; and that the meaning of the aforesaid words shall not be restricted, although the same may be subsequently referred to in the singular number and masculine gender only.

XVII. "And be it enacted, that nothing in this Act contained shall extend to Ireland.

XVIII. "And be it enacted, that this Act shall commence and take effect from and after the ."

Such are the provisions of the bill upon which the members of the "collective wisdom" of the nation will have to deliver their sage opinions. The attentive reader cannot fail to perceive two very striking omissions in the document. *First*,—not one clause is framed with a view to prevent the *buying* and *selling* of dead human bodies,—indeed there is not one word on that subject; and, *secondly*,—the bill imposes no penalty on those individuals who may violate its stipulations. Hence, we of course infer that it cannot be enacted into a law in its present form. What we consider the bill *ought* to be, may be collected from the remarks which we have offered on the document now before us, but as we may have failed in explaining our views fully on this subject, we shall again take up the subject in our ensuing number.

CHOLERA.

TRANSFUSION OF BLOOD.

Amongst the multitude of remedies suggested in the treatment of this destructive pestilence, there is one which bore some probability of being useful in the terrible state of collapse. We allude to the *transfusion of healthy blood* into the vessels of the sinking patient. This subject attracts our present notice, in consequence of a proposition which has just been sent to us by Mr. Leary, the eminent surgeon of Parliament-street.

We have only to state, that transfusion of blood has already been adopted in some cases, reports of which were delivered at a late sitting of the Academie de Médecine in Paris. This remedial agent was found, however, to have completely failed.

A Practical Medico-Historial Account of the Western Coast of Africa, &c. By James Boyle, M.C.S.L., Colonial Surgeon to Sierra Leone. London. Highley. 1831. 8vo. p. 423.

If there be a part of the world wherein disease and pestilence rage with more than ordinary violence, it is the spot in which the ill-fated inhabitants of Gambia and Sierra Leone are compelled to dwell. The principal causes which give rise to the malignant fevers of western Africa, seem to be, the variable nature of the climate, the heaviest rains being immediately succeeded by the most intense heat, and, chiefly, the immense masses of decaying putrid vegetable matter, in the immediate vicinity of all our settlements upon this coast;—these masses being acted upon by heat and moisture, generate a poisonous *miasma*, which no European constitution can withstand.

Mr. Boyle has applied himself with a zeal and assiduity, worthy of the highest commendation, to an investigation of the character and treatment of the diseases prevalent in western Africa, and of the causes which have contributed to render the fevers of that portion of the world so fatal and destructive. His work is also rendered interesting to the reader by accurate topographical details of the several British settlements at Sierra Leone, the Gambia, Cape-coast Castle, Fernando Po, &c. Our limits will not permit us to bestow more than a general commendation on the present volume. It is rather prolix, but we can readily believe this to have arisen from an anxiety on the part of the author, to do full justice to a subject of so much interest,—one, moreover, which is now brought before the medical world for the first time. The bilious remittent, endemic, and intermittent fevers of Sierra Leone, are discussed in detail, and the reader will find an elaborate account of the epidemic which raged in Free-Town during the summer of 1829. The number of fatal cases which occurred during the prevalence of many of these epidemics is really appalling; we subjoin an extract from one return; even the cholera seems a mild disease, when compared with the bilious remittent fever of 1825, as it appeared at Sierra Leone, Gambia, and the Isles de Los. At the former place it destroyed 3 in every 8 cases treated, at Gambia the deaths were to the cases as 2 to 3, while at the Isles de Los, the healthiest station in the windward coast, the mortality was 1 in 7.

The book contains also much matter interesting to the general reader.

A System of Anatomical Plates of the Human Body, accompanied with Descriptions and Physiological, Pathological, and Surgical Observations. By John Lizars, F.R.S.E., &c. Folio vol. of Plates. 8vo. vol. of Letter-press. Edinburgh, W. H. Lizars.

We have already at various times expressed our opinion of the value of anatomical plates, both to the student and to the surgeon, when engaged in the practical duties of his profession. The former is enabled by the assistance of faithful and clear representations of nature, to pursue a course of dissection with great facility and advantage to himself, while the practitioner who has now neither the time nor the opportunity to dissect, may revive former ideas by an attentive study of these pictorial subjects, and thus keep up a knowledge of the structure and relative situation of the various parts of the human body, which alone can afford foundation for scientific and successful chirurgical practice. We have had ourselves frequent occasion to regret the want of a complete set of anatomical plates, executed with any degree of accuracy as copies, or merit as works of art. Caldani's plates, though splendid engravings, taken from the best original writers on the several divisions of anatomy, are placed beyond the reach of the great mass of the medical community by their price;—between twenty and thirty guineas. We, therefore, feel indebted to the proprietor of Mr. Lizars' plates, for having produced a collection which every student may purchase, and consult with decided benefit. The volume before us contains 101 plates; the greater part plain engravings; the remainder are coloured representations of the brain, illustrating the complicated anatomy of this organ. The price of the work has been reduced from 12*l.* 12*s.* to 6*l.* 6*s.*, and from

7*l.* 7*s.* to 4*l.* 4*s.*; this reduction, moreover, has taken place without any diminution in the intrinsic value of the plates; for if our memory serve us aright, the present engravings are certainly superior to those which appeared several years ago in fasciculi or parts.

The following analysis of the volume will show our readers in what manner the whole number of plates is distributed amongst the several divisions of anatomy: To the bones are allotted 8 plates; blood-vessels and nerves, 20; muscles, 26; brain and spinal marrow, 15; organs of sense and viscera, 19; organs of generation, 6; gravid uterus and lymphatics, 7. Of the engravings themselves and their value as accurate representations, we have not much to say; many of them certainly are very correct, but there are others which had much better have been taken from Scarpa, Walter, or Sœmmering. The blood-vessels and nerves should also have been given in distinct drawings; and if more plates had been devoted to this part of anatomy, some little confusion would have been avoided; on the whole, however, we recommend the present collection as the best and cheapest work which the medical inquirer can possess. We must not omit to mention that the plates are accompanied by a large volume of letter-press, which contains numerous interesting physiological and pathological observations, together with the descriptive anatomy of the parts represented.

Maingault's Illustrations of the Different Amputations performed on the Human Body, represented by Plates designed after Nature, with Alterations and Practical Observations. By W. S. Cox, Lecturer on Anatomy, &c. London: Longman, 1831. Folio.

These plates will fill up an *hiatus* which ought not to have existed so long in our surgical literature, and may be advantageously consulted by teachers of anatomy, and operating surgeons, or such students as have the opportunity of performing the different amputations on the dead subject. The original work has been praised by Messrs. Pelletan and Percy, in their report to the French Institute; and although we must allow something for the nationality which often induces Frenchmen to flatter each other, we agree with the reporters in saying, that however clearly and precisely an anatomical subject may be described in words, it is more or less difficult of comprehension. The various rules and details of a complicated surgical operation, more especially, cannot be retained in the memory, where the knowledge of them has been obtained from books, without the aid of the pictorial art. But faithful representations from the pencil, will both communicate and recal at a single glance all those essential circumstances connected with the operation which enable us to proceed with boldness and assurance of success.

With respect to the original plates, Baron Percy notices that the natural proportions are well observed, and that the drawings are remarkable for purity and correctness. We have not seen those from which Mr. Cox has made his copies, but we are inclined to believe the latter do not fall very short of them in fidelity. We may note, in particular, the representations of the amputations of the hand and foot at their articulations. Of the rest we may state that they are very faithful delineations of the anatomy of a stump.

LONDON PHRENOLOGICAL SOCIETY,

PANTON SQUARE, HAYMARKET.

December 19th, 1831.

Joseph Moore, M.D., Vice-President, in the Chair.

Mr. George Bennett, F.L.S., presented before the Society the head of a New Zealand Chief, named *Bola*, whose character had been described. Mr. Bennett then read a paper on *Cannibalism*, as it existed among the New Zealanders, and other Savage nations, in which numerous facts were brought forward to prove that the custom did not proceed from hunger, but for the gratification of the revengeful passions, which were found to prevail to the greatest extent, and to be attended by most disgusting ceremonies, among the inhabitants of those islands where the warrior was held in the highest estimation, where the destructive passions predominate over the intellectual, as at New

Zealand, the Marquesas, New Hebrides, &c. &c. Mr. Bennett also introduced the mode of preparing human heads among the New Zealanders, a detailed account of which he has just published in the Journal of the Royal Institution. He also noticed a remarkable coincidence of a similar custom existing among the Ashantees as obtains among the New Zealanders. During the late Ashantee war the head of Sir Charles Mac Carthy was preserved, in which the features remained and presented nearly the same appearance as when he was alive.

The skull of *Nancy Beothic*, a Red Indian female (one of the last relics of an interesting family, the original possessors of Newfoundland), was laid upon the table, by the treasurer, Mr. J. B. Sedgwick.—The Red Indians differed in appearance, language, and manners, from the Esquimaux and Miemac tribes, who inhabited the neighbouring shores of Labrador and Acadia.

FOREIGN DEPARTMENT.

PROLAPSUS OF THE TONGUE, CURED BY COMPRESSION AND THE EXTRACTION OF FOUR MOLAR TEETH.

The patient, a young Spanish woman, ætat. 26, was under the care of Professor Delpech. She had, during five years, a displacement of the tongue, which had attained ten times its natural size. Filling the entire cavity of the mouth, this organ stretched far beyond the lips, hanging vertically much below the chin; thus the pillars of the velum palati were drawn obliquely forwards, and the tonsils thrown out of place in front, whilst the anterior-inferior teeth were rendered irregular and divergent, and the lower lip disfigured and infiltrated. The lateral teeth were buried by the tongue, along and around which the saliva was unceasingly flowing in great abundance out of the mouth, particularly at the time of meals. The consequence of this condition of the parts was an inability on the part of the patient to take any other kind of food than such as consisted of broths or light soups, so that her supply of milk (for she was suckling a child) became very scanty, and her infant sickened and quickly died.

This enlargement being regarded as *œdema*, compression was had recourse to, which seemed to promise success. Many a time was the tongue so reduced as to be capable of returning into the mouth, but as often there would come on an inflammatory fluxion, and it would relapse into the previous œdematous condition. This state of things continued, at short intervals, during five years of the patient's life. A collection of fluid formed around a lump in the centre of the tumid mass, hard and painful on pressure long applied. No explanation offered itself to account for the regularity of intervals observed in these *fluxions*, which made their appearance every month; the menses were undisturbed, nor was there any suppression of the natural secretions. The treatment now employed consisted of the application of leeches and local fomentations on the recurrence of each attack, with compression, particularly at the time of the *fluxions*. Bathing and bleeding of the feet, ice to the tongue and its neighbourhood, restriction of usual food, with purgatives,—all were tried, but without success.

Upon one occasion, when the tongue was reduced to its natural state, it was perceived that, notwithstanding this reduction, the mouth could not be closed. The obstacle did not exist in any truss, or pressure exerted upon that part; the tongue was not overlapping the teeth, but when one removed the bandage the mouth remained open. Upon attempting to strike the jaws one against the other, a loud shock was experienced, which shock was found to proceed from the inferior molar teeth having taken a direction obliquely inwards, so that their external tuberosities came beating against the middle of the under surface of the teeth above, and formed a wedge which kept the jaws apart; in order, therefore, to get the mouth closed, it was necessary that this obstacle should be removed. For this purpose the two last inferior molar teeth were extracted on each side, after which, although the approximation was considerably advanced, the rows of incisors nevertheless could not cross, nor even touch, each other. Mastication, however, was rendered practicable, and the tongue was easily retained in its proper position, and the rest might be left to be effected by the grinding of the teeth. The compressing bandage was discontinued, and the jaws kept in apposition by a cravat tied on the top of the head, the patient at the same time taking care not to displace the tongue in the act of mastication. Under this treatment the engorgement of the organ entirely disappeared, even to the hard central swelling. From day to day the contact of the jaws, from the grinding of the teeth, becomes more complete, the volume of the tongue more natural, and the articulation of words is accomplished with less difficulty. However, the incisors still do not touch, pushed forward as they have been by the force of the tongue. The cause being removed, there is every reason to suppose that, worked upon by the pressure of the lips, they will resume their normal position.—*Lancette Française.*

CANCER OF THE BREAST, IN A MAN—EXTIRPATION—CURE.

CANCER of the breast, though common in the female, rarely attacks men; we therefore give the following case:—

Charles Barthelemy Gillet, a labourer, aged 52, in planting some vine stakes about eight years since, received a blow on the left breast. This was followed by vivid pain in the part contused, succeeded by the appearance of a small hard lump, which during the two consecutive years had scarcely attained the size of a pea. Since that time it has made insensible advances, and, upon his admission to the *Hotel Dieu*, (under M. Sanson), was of the volume of a pullet's egg. The tumour is hard, tuberculated, unequal, the seat of lancinating pains; the skin adherent to it is thinned, and about to ulcerate at many points. There are two axillary ganglia affected, of small size, in which no shooting pain has yet exhibited itself. General health good. The operation was performed on the 14th November. The tumour was circumscribed by two semi-elliptical incisions, after which it was exposed by a careful dissection. The incision was extended along the lymphatic vessels, and the glands of the axilla were drawn forward by means of a cord which they formed, being a bond of union between them and the enlarged structure. Two small glands, as big as a large pea, were then removed.

The edges of the wounds being brought correctly together, the usual dressings were applied.

No untoward symptom has appeared as the effect of the operation, and the patient being now completely cured is about to leave the hospital. He would doubtless have left already, had there not come on, without any obvious cause, a phlegmonous abscess in the right arm, just over the debut of the humeral artery. This abscess has been opened and is nearly cicatrised. —*Lancette Française.*

EXPERIMENTS ON THE BLOOD IN CHOLERA.

To the Editor of THE LANCET.

SIR,—Having been enabled to complete the experimental inquiries on which I have some time back been engaged in Newcastle upon-Tyne, I beg you will have the kindness to give insertion to the annexed outlines of the results I have obtained:—

1. The blood drawn in the worst cases of *the* cholera, is unchanged in its anatomical or globular structure.

2. It has *lost a large proportion of its water*, 1000 parts of cholera serum having but the average of 860 *parts of water.*

3. *It has lost also a great proportion of its* NEUTRAL *saline ingredients.*

4. *Of the free alkali contained in healthy serum, not a particle is present in some cholera cases, and barely a trace in others.**

5. Urea exists in the cases where suppression of urine has been a marked symptom.

6. *All the salts deficient in the blood, especially the carbonate of soda, are present in large quantities in the peculiar white dejected matters.**

There are other results of minor consequence, to which I will not at present allude, neither shall I *on this occasion* offer any observation on the practical inference to which my experiments may lead. In a few days a detailed report shall be published, in which the mode of analysis, &c. will be minutely described. It will be found, I regret to say, in every essential particular, to contradict that recently given by Hermann. All my experiments, however, have been publicly performed, and can be authenticated by numerous witnesses, a precaution I thought it necessary to adopt, lest it might be supposed that I impugned, without sufficient foundation, the accuracy of the Moscow professor.

May I add, that until the publication of my report, I shall deem the suspension of discussion on the results now introduced as a matter of personal courtesy and obligation.

I am, Sir,
Your obedient servant,
W. B. O'SHAUGHNESSY, M.D.

London, 29 December, 1831.

SIR HENRY HALFORD.

To the Editor of THE LANCET.

SIR,—You have proved yourself such an admirable limner in pourtraying the prominent features of the "heads" of our profession, and have from time to time so well followed up your sketches with physiognomical reflections, that I cannot forbear sending you the subjoined passage, cut out from the *Morning Chronicle* of Tuesday. You *should* insert it, as a *recherché* vignette, to fill up a niche in the well-known "Sketches of the Medical Profession." Here is the extract alluded to:—

"A ludicrous mistake happened to Sir HENRY HALFORD on the rejection of the Reform Bill. Sir Henry is, or was, Court physician, and a courtier, and anxious, as a courtier should be, to stand well with all

* The blood and dejected substances were obtained in one analysis, from the same patient, and the blood was drawn half an hour after the evacuation occurred.

parties. The morning after the decision of the House of Lords, he wrote to the Marquess of Tavistock, in a tone of mingled grief and anger, to condole with his Lordship on the temporary defeat of a measure which promised blessings to the country. The same morning was witness to an epistle on the same subject from the complaisant Knight to the Earl of Westmoreland. The contents of the second letter were somewhat different from those of the first. Sir Henry had addressed Lord Tavistock as friend addresses friend on the occasion of some lamented bereavement; he spoke to Lord Westmoreland as friend speaks to friend at a marriage or a christ-ning; "He was over-joyed, and, no doubt, his Lordship would be, at the final rejection of a bill which was pregnant with revolution, anarchy, and everything that was bad." The letters were folded and enclosed; but, alas! some one of those tiny mocking spirits that love to make game of good intentions, slipped Lord Westmoreland's note into Lord Tavistock's envelope, and Lord Tavistock's into Lord Westmoreland's. The heir of the house of Russell read and pondered, pondered and read, and had just arrived at the charitable conclusion that poor Sir Henry was in a fair way to pay a visit to his brother Dr. Burrows, when, from certain family queries, he contrived to puzzle out the mistake, and his announcement of it reached Lord Westmoreland at the moment when the Earl was searching, but in vain, for a clue to the meaning of the lugubrious phrases in which Sir Henry lamented the success of a victory to which the noble Earl had so heartily contributed. Both the letters are in the possession of Lord Brougham. What Sir Henry said, or how Sir Henry looked, when the blunder was explained to him, we leave George Cruikshank to tell."

There, Sir, if that be fiction, then sel m has fancy so successfully attired herself in the garb of truth; if, on the contrary, the statements be correct (and as yet I have seen no contradiction of them), then how admirably do they illustrate the fidelity with which your graphic LANCET has etched an "eel-backed courtier!" As to that part of the etching process denominated "*biting-in*," it may be remarked that you seldom fail in making it effective. The writer of the quoted paragraph asserts that "*both* the letters are in the possession of Lord Brougham"—that very nob eman, respecting Sir Henry's double-conduct to whom, you made some cutting remarks soon after his accession to office. Lord B. must be puzzled to remember *which* of the Sir Henrys is President of the College in Pall Mall East.

Your obedient servant,

T. J. H.

London, Dec. 27th, 1831.

TREATMENT OF CHOLERA

ON A NEW PRINCIPLE.

By T. SHELDRAKE, Esq.

To the Editor of THE LANCET.

SIR,—Under existing circumstances, you will, perhaps, excuse me for troubling you with this communication. Ten days ago, I wrote a letter to Dr. JAMES JOHNSON, of which I subjoin a copy. In consequence, he called upon me, when I explained the treatment I alluded to, as well as it could be explained in the short conversation we had together; he seemed to think favourably of it, and advised me to write an explanation of it in THE LANCET, as the most effectual way to place it in the hands of those to whom it may be useful. In consequence of that advice, I trouble you with this application, to ask if you will insert this communication, and what space you can allow for it in your much-occupied pages.

I am, your most obedient Servant,

T. SHELDRAKE.

No. 73, Upper Berkley-st. Portman-sq.
December 11, 1831.

To Dr. JAMES JOHNSON.

SIR,—You will, perhaps, excuse this communication from a stranger, when his motive for making it is explained. I have no knowledge of cholera morbus, other than may be obtained by a cursory perusal of the writings in circulation. *Practically, I know nothing about it.* I have just read in THE LANCET, the "propositions" which you laid before the Westminster Medical Society, on Saturday, November 26, and was very forcibly struck with the following passage.

"No. 18. The external remedies are three—heat, friction, and counter irritation. These three means should be employed, not only simultaneously with respect to each other, but contemporaneously with the internal remedies. They should also be so employed that the patient may not be required to throw a single voluntary muscle into action. Every muscular movement, even that of sitting up in bed, is prejudicial, or absolutely dangerous."

It would seem, that in the above passage, you were describing a practice in which I have been extensively and successfully employed more than forty years, without making the particulars known to the profession, but which I will develope to you so far as it may be applicable to the treatment of cholera, according to your view of that important disease.

My object, in my own practice, was to produce alteration in the organic structure of some muscles, in the persons of those

upon whom I was occupied. In this I have always succeeded; and in doing it I have invariably found that I effected an increase of circulation in the limb upon which I operated, and was surprised to find that, at no distant interval, the beneficial results, as to improvement of general health, extended to the whole person of my patient. I could not witness this, undeviatingly, and in daily progress, without endeavouring to ascertain the cause of so remarkable an effect, and I succeeded in convincing myself that it was owing to two circumstances.

First, when the heart, no matter from what cause, could not impel the blood into the arteries with sufficient force to keep up a healthy circulation, I, by artificial action upon the extremities, *without the least exertion of the patient*, impelled the blood towards the heart, and thus a healthy circulation was restored and kept up for any time that was required, without the patient making any exertion to obtain it.

The second was to produce increased action upon the surface of the body, without excessive irritation, or at least with such a degree of counter-irritation as would be beneficial without producing inconvenience to the patient, the active material being conveyed into the system by the absorbents, without passing by the stomach. To accomplish this I use the etherial spirit of turpentine, *not* as an embrocation, but as an external application, so managed as to be in close contact with the body for many days together, without producing any unpleasant irritation, at the same time that a constant, genial, and extensive glow is kept up in the whole limb to which the application is made. This is effected by the management which prevents the spirit evaporating from the surface, where it remains till it is absorbed and carried into the system, thus producing the effect that is expected from it.

I am borne out by your statement, in believing this practice would prove beneficial in the treatment of cholera. In several statements which I have seen, spirit of turpentine is said to have proved beneficial when administered by the stomach, though its effects upon that organ must be disagreeable to the patient, before its beneficial effects can be felt; but by introducing it into the system in the manner I have described, and keeping it there to any extent that may be desirable, the stomach is left open to the operation of any other class of medicines it may be thought expedient to employ.

The fact,—that the circulation may be maintained, by extraneous means, to any extent, and the patient, during the whole time of the process, remain quiescent,—has long been known to me, and practised in many cases, besides those belonging to that department which is my peculiar province, and has been so beneficial to those for whose benefit it was adopted, that I have long determined to publish what I have seen on the subject; but as my engagements oblige me to postpone that work to an indefinite period, and I see that the passage I have quoted from your papers bears directly upon the subject, I thought you would excuse my offering it to your notice, and asking whether you think with me that it might be in any way beneficial on the present momentous occasion.

I am, Sir, your most obedient servant,
T. Sheldrake,

73, Upper Berkeley Street,
Portman Square.

Davis's Midwifery.—Part II. of Dr. D. Davis's "Principles and Practice of Obstetric Medicine," was published on the 1st of December, and fully supports the high character which has been so universally bestowed on the first part. We shall notice the work at some length on another occasion, but in the mean time we earnestly recommend it to the attention of practitioners and students. Part III. is to appear January 1st, 1832.

CORRESPONDENTS, &c.

Communications have been received from Philanthropos—Mr. J. R. Young—A Non-medical Subscriber—Mr J. Baker—Tyro—A Constant Reader (Bristol)—Mr. Willcock—Mr. J. H. Tucker.

A. B. inquires if there are "any 'recognised' medical lecturers at Cork." We regret that we cannot answer the question; probably a correspondent will favour A. B. by communicating the information which he desires.

An Apprentice, and Junior Subscriber. In courtesy the court will admit our correspondent to an examination under the circumstances which he describes, but he could not, at *law*, enforce a compliance with his demand. In order, however, to prevent disappointment, he should apply to the court now, state his case, and inquire in distinct terms, whether they will admit him to examination if he devote the last eight months of his time, specified under the indentures, to an attendance on lectures in London

Mr. J. R. Young. The inhalation of oxygen gas has been tried alone, and in conjunction with many other remedies, but in no instance with a successful result.

Mr. J. P. (Coventry). The proposals contain nothing new. The remedies have all been tried and have failed.

Mr. Henry M — tt, writing, we suspect, in rather a waggish mood, makes the following suggestion:—"Let every parish be *compelled* to furnish from its poorhouse a *certain number* of dead bodies annually to the nearest licensed school of anatomy, according to its amount of population, and the demand of the schools."